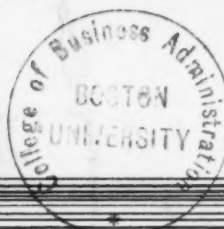


Manufacturers Record

Industry Construction



\$6.50 per Year.
Single Copy, 20 Cents.

Baltimore, Md.
JULY 3, 1930

American Independence

We are about to celebrate our nation's birthday. One hundred and fifty-four years ago, July 4th, the United States of America was born. In the family of nations we are still only a youth, just coming into the fullness of life. One hundred and fifty-four years from the point of view of nations' lives is but a decade in the life of man.

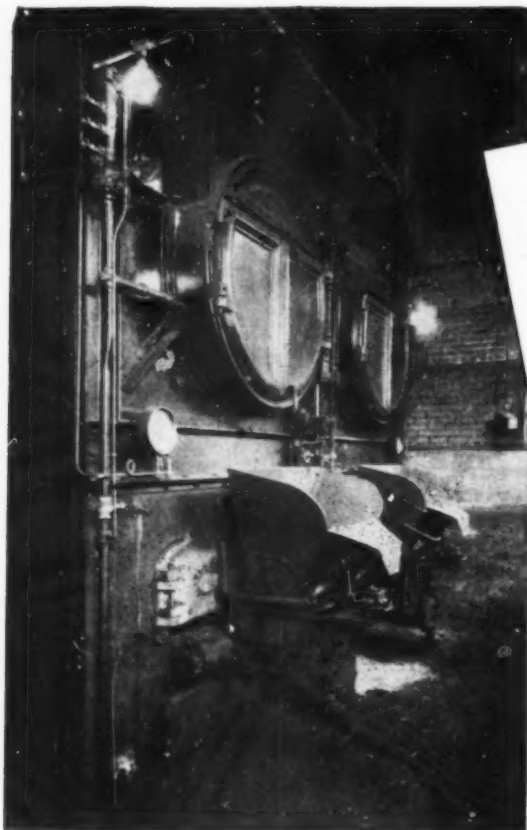
Because of our national anniversary it is particularly fitting that we should at this time study thoughtfully two of the international problems now being considered by our government from the point of view of America's traditional policy of noninterference in European affairs.

The London Naval Treaty, for which our representatives went abroad and on which they labored many weeks, presents one of these problems. Its purpose is to halt the struggle for supremacy in naval equipment without materially changing the present naval power of the world's great nations. Shall we ratify this treaty? Will our ratification be another step towards participation in European politics, and may it not lead to other relations more serious in their involvement?

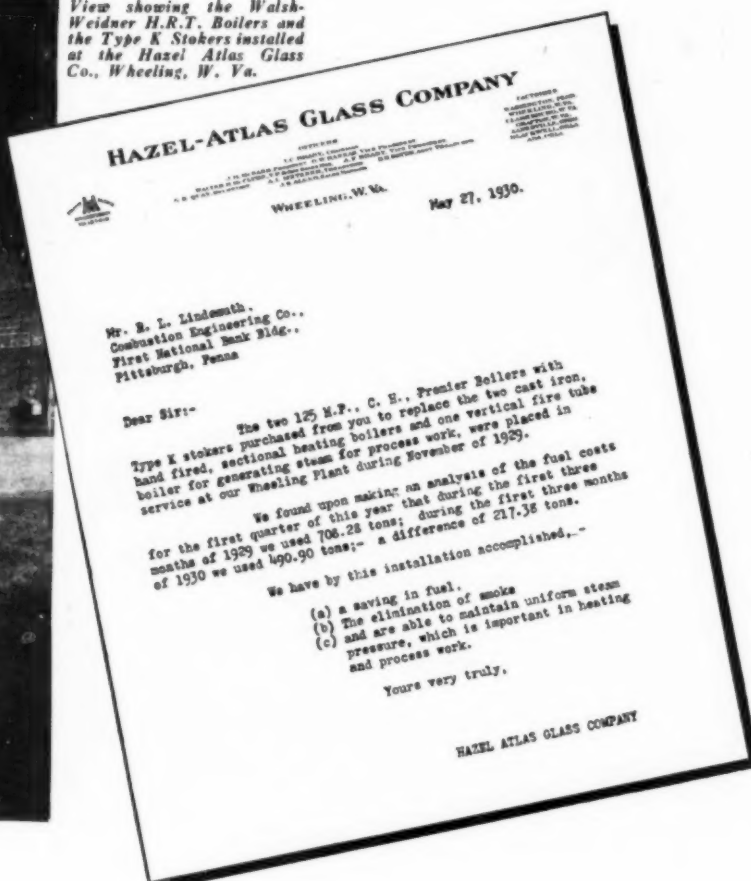
Our proposed entry into the World Court will in time be debated in Congress. This is the second of these problems. Shall we as a nation be a member of a World Court? With our national ideals and our national wealth can we do more to promote world peace as a unit in a judicial body or as a powerful and disinterested outsider whose desire for peace is unquestioned, and whose freedom of action is unfettered?

Are we as a nation to continue to strengthen the traditions of the past and refrain from further European entanglements or are we to change our national policies and become involved in the endless turmoil of foreign politics kept active by age-old racial jealousies?

The Manufacturers Record believes that we should continue on the principles laid down by our forefathers, that we should develop them to meet present-day conditions, but that we should not discard them as obsolete and substitute for them policies dictated to us by political conditions abroad. Remember we are celebrating Independence Day. Let us, therefore, maintain that independence so that many more such days may be celebrated by our descendants.



View showing the Walsh-Weidner H.R.T. Boilers and the Type K Stokers installed at the Hazel Atlas Glass Co., Wheeling, W. Va.



217 tons less coal

the first quarter of this year as compared with last year

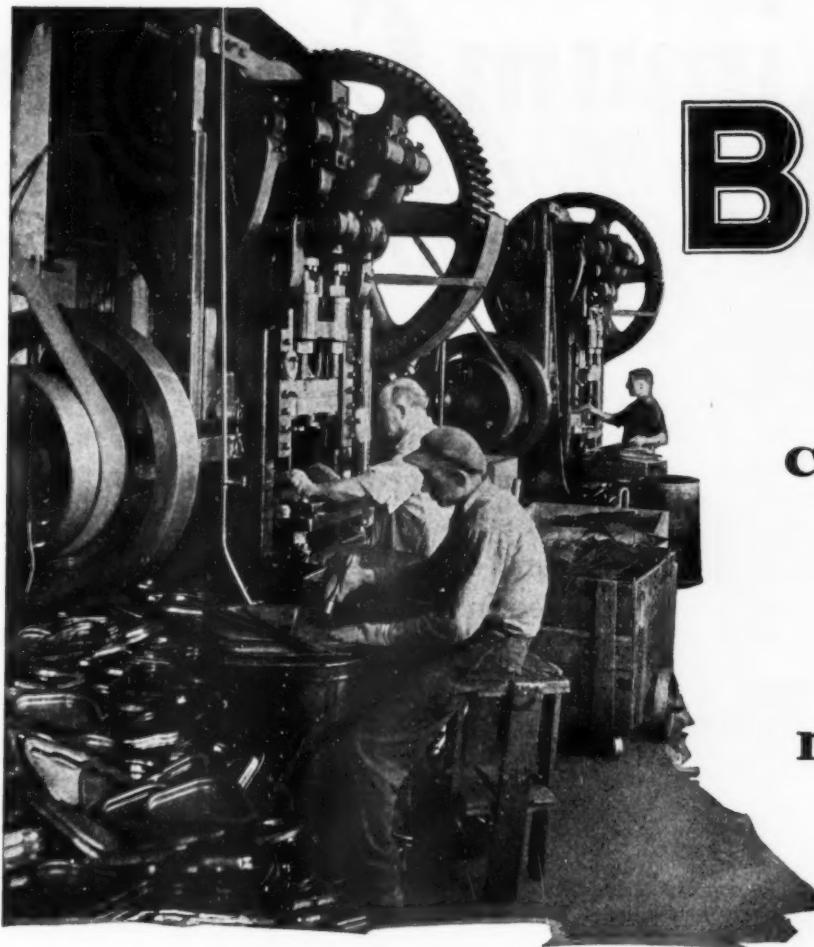
Two Hundred Seventeen tons less coal for the first quarter of this year, as compared with the same period of last year, is a considerable reduction in fuel for firing two 125 hp. units.

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A catalog illustrating and describing the Type K Stoker (for boilers up to 200 hp.) is available and will be sent upon request.

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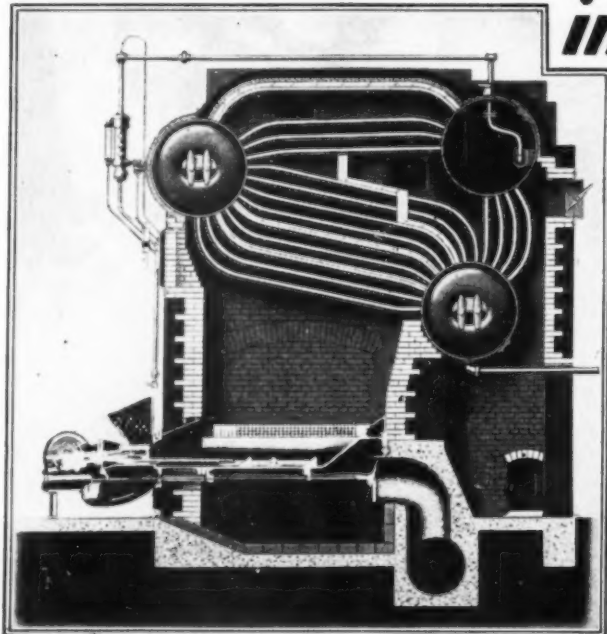
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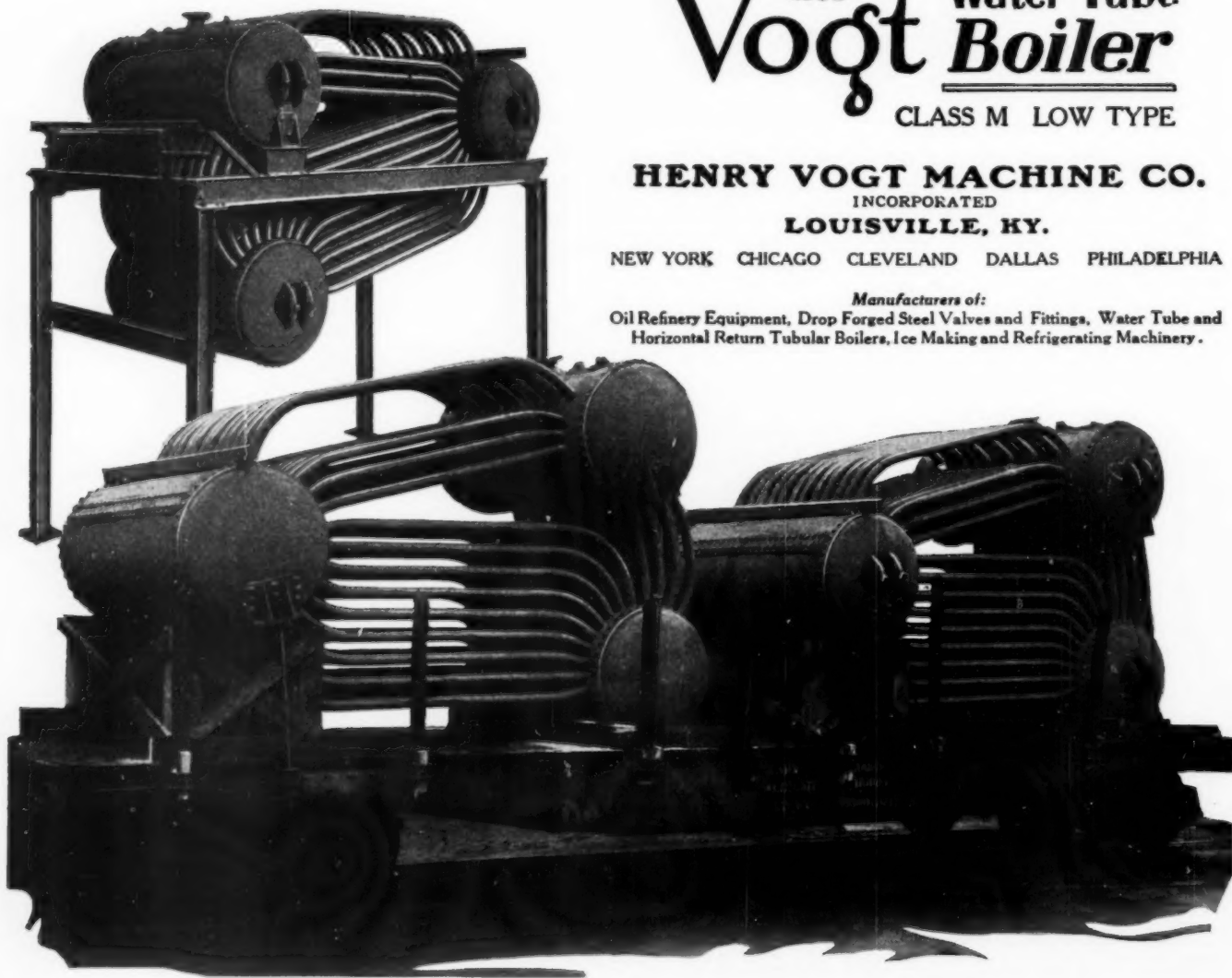
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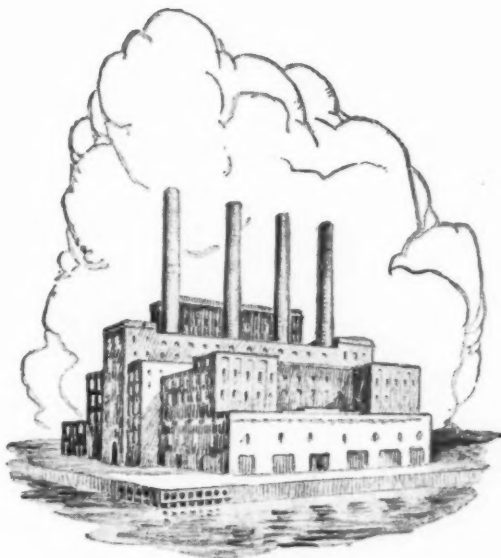
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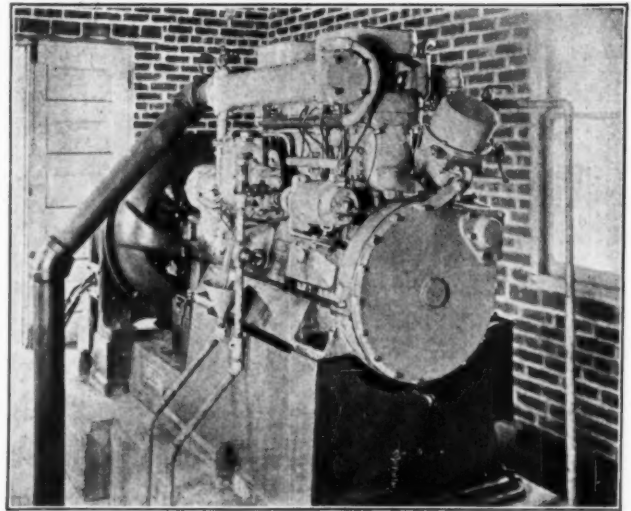
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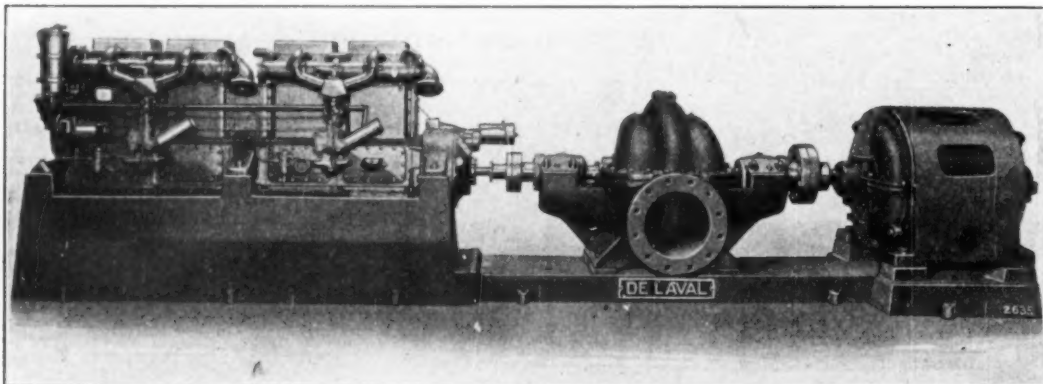
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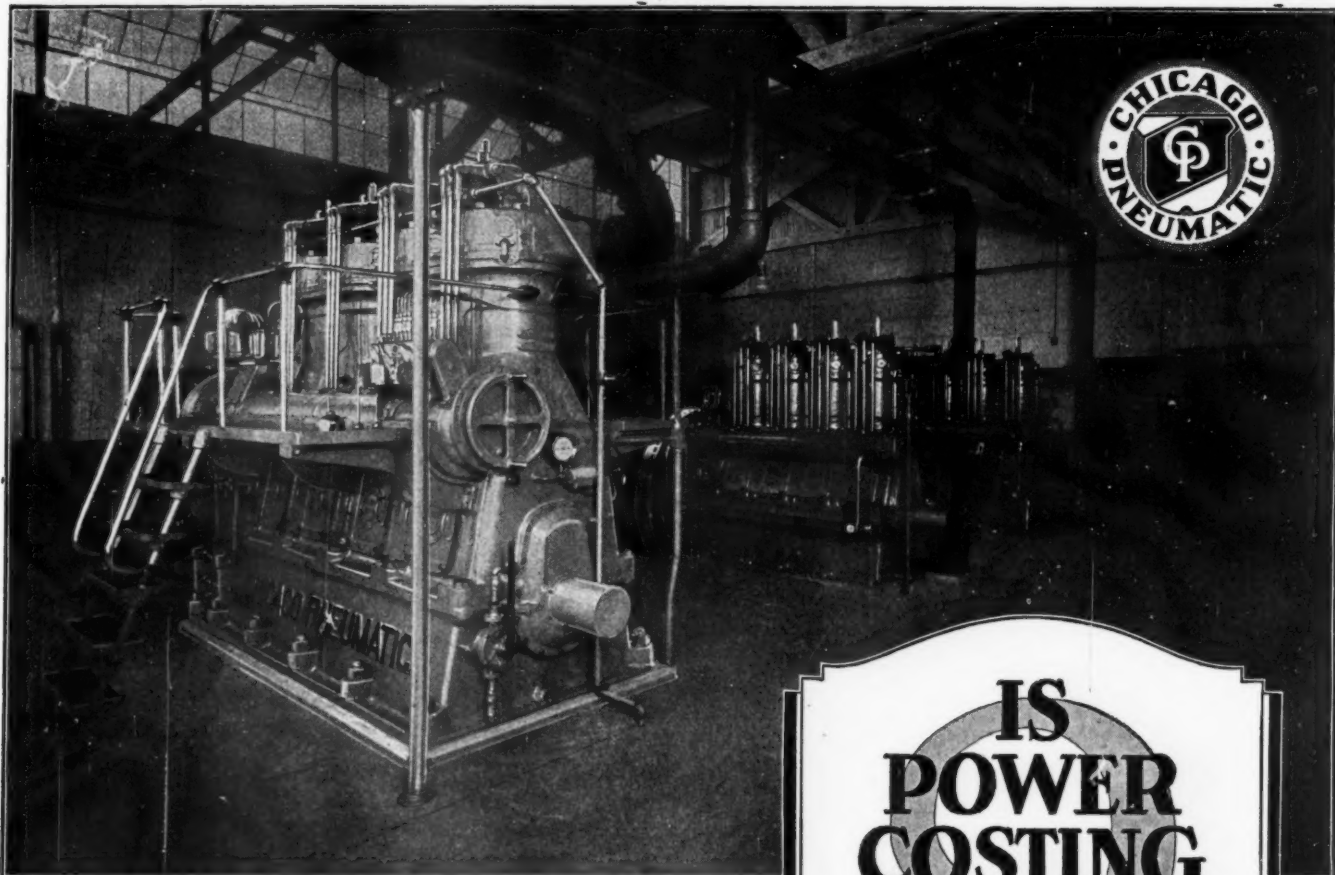
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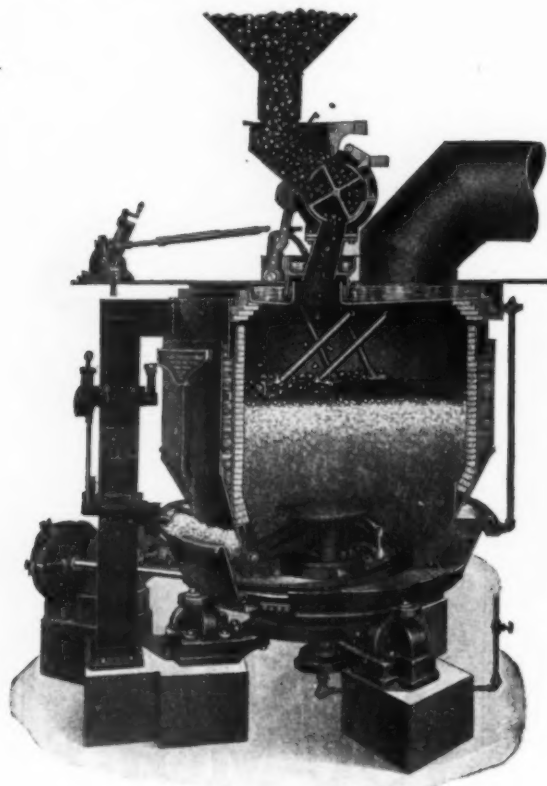
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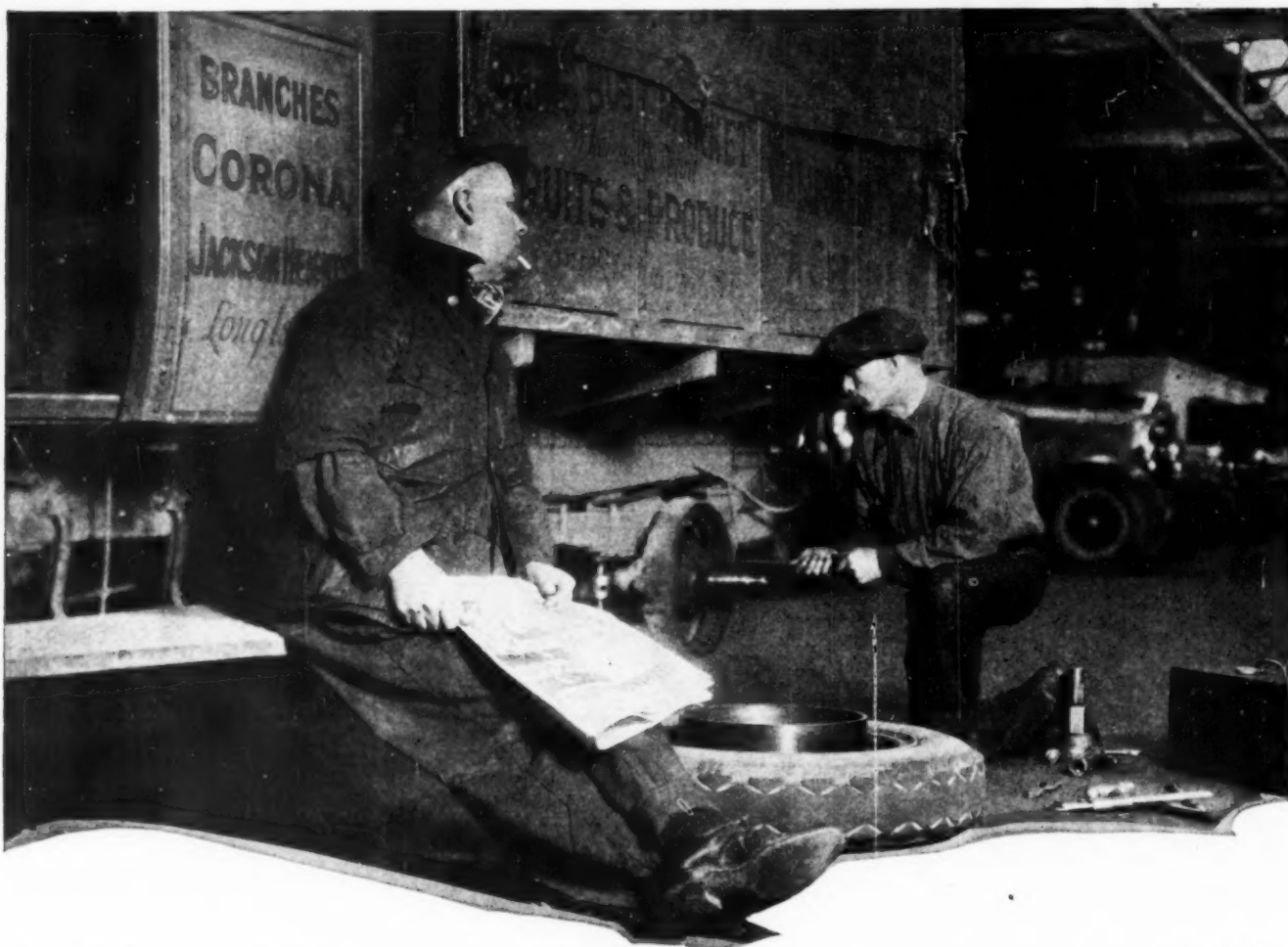
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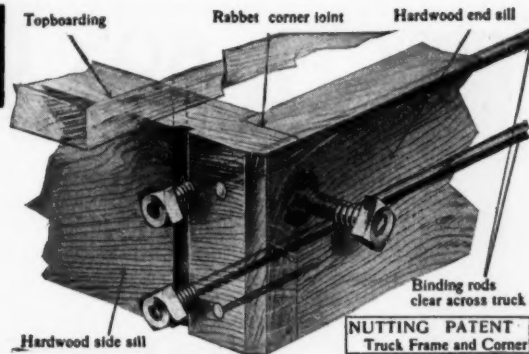
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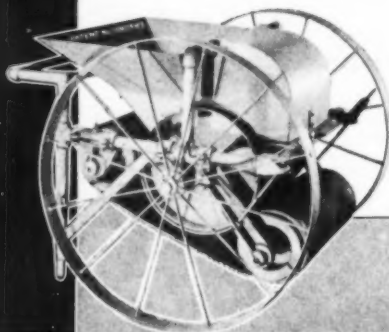
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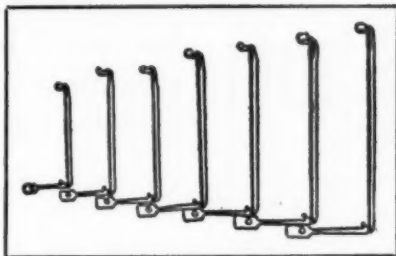
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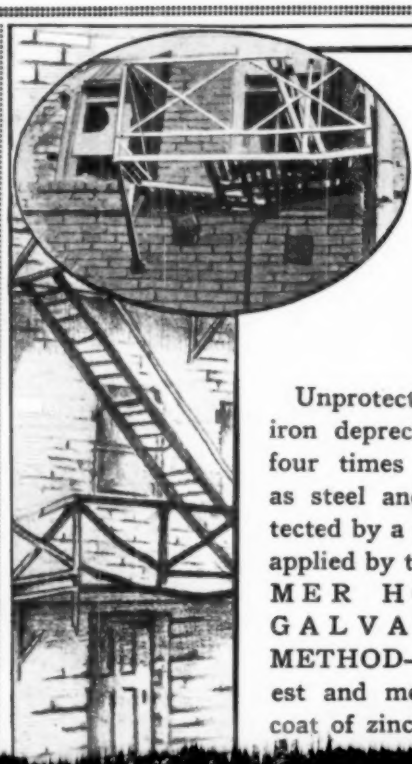
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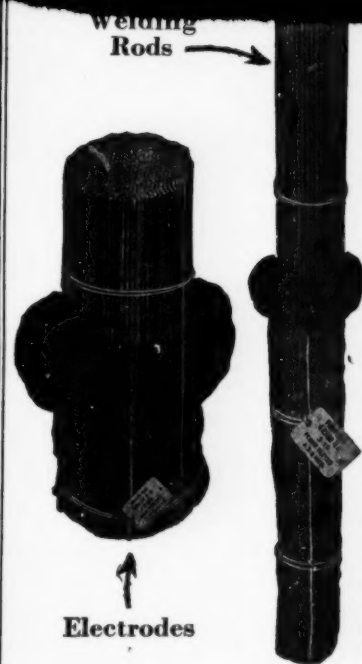
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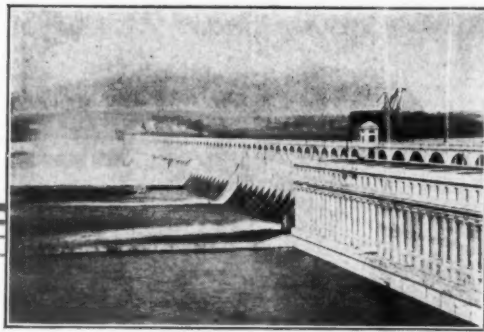
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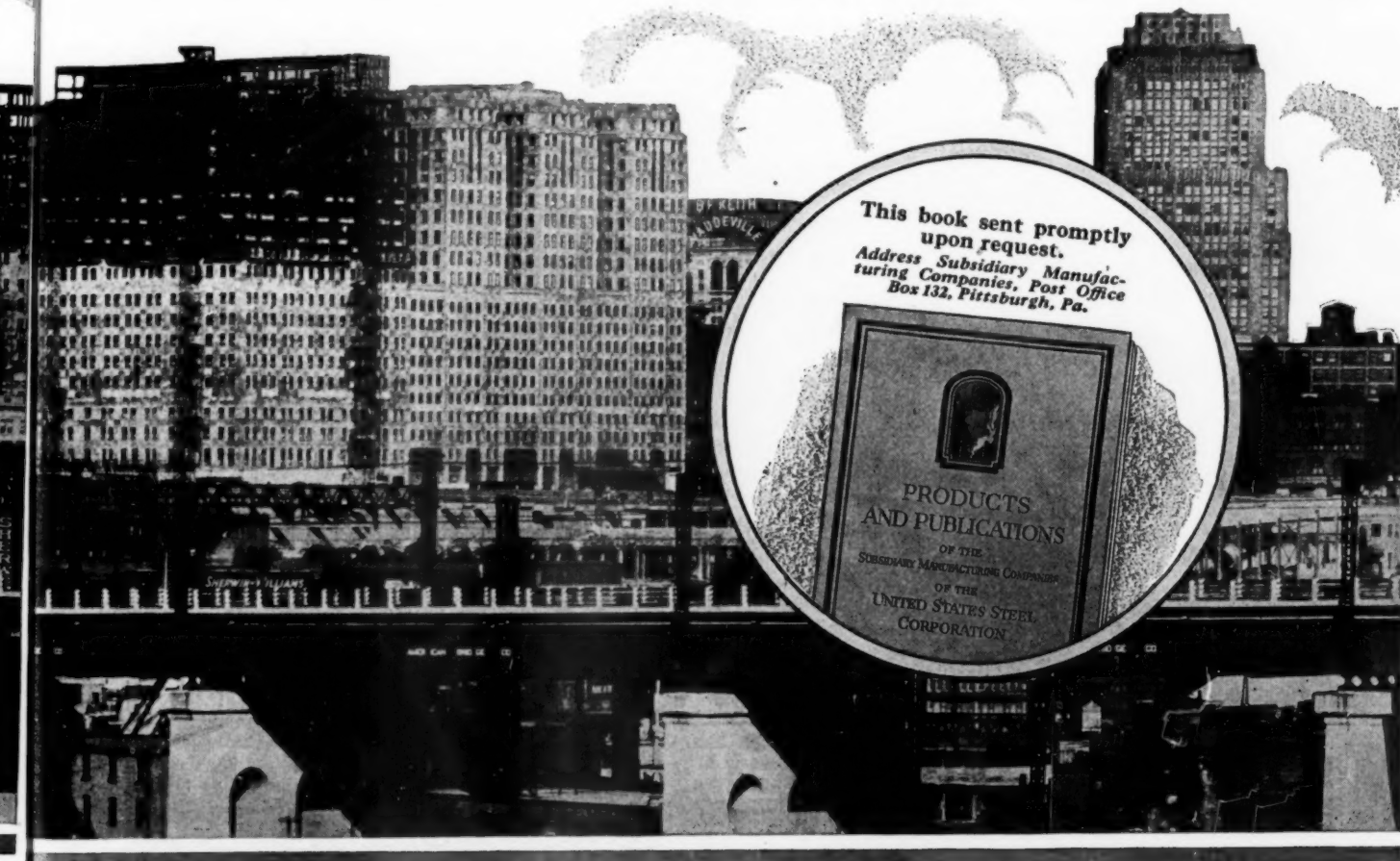
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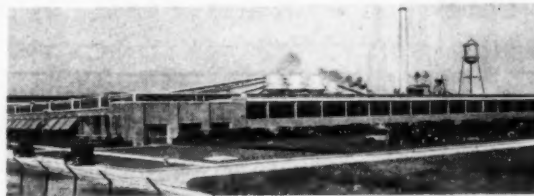
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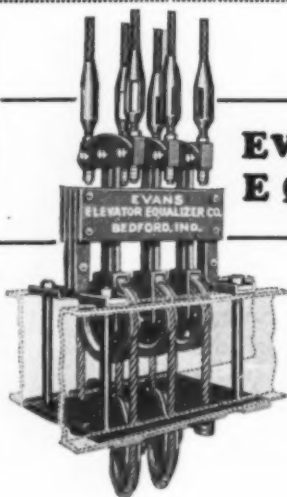
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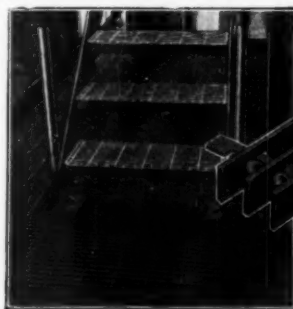
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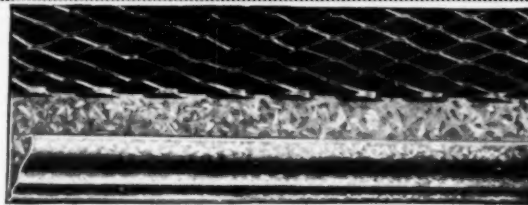
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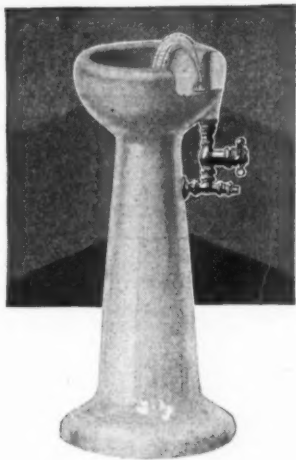
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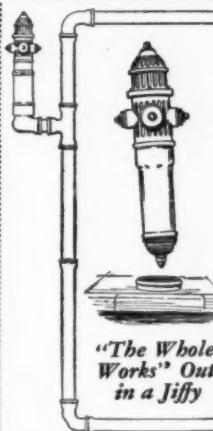
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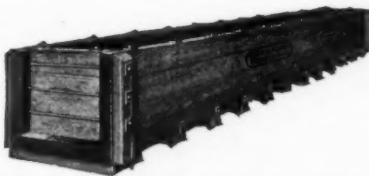




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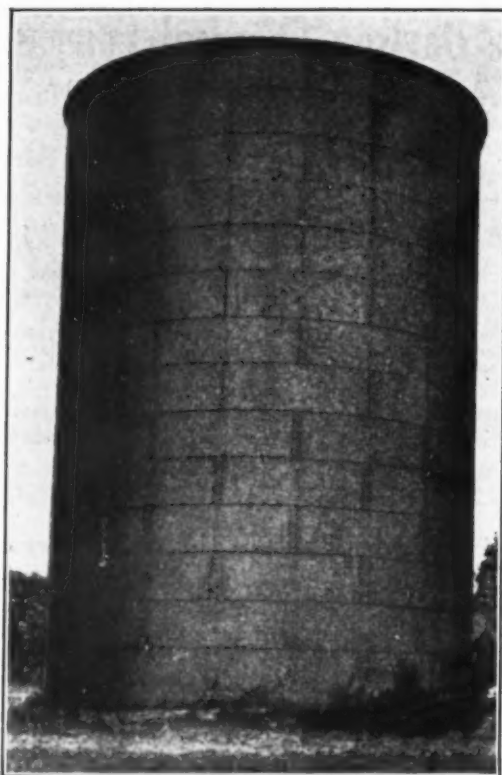
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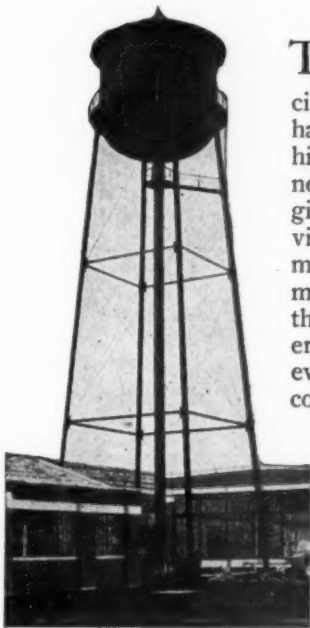
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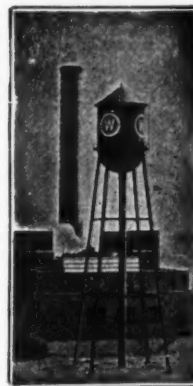
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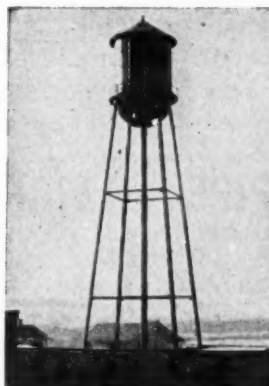
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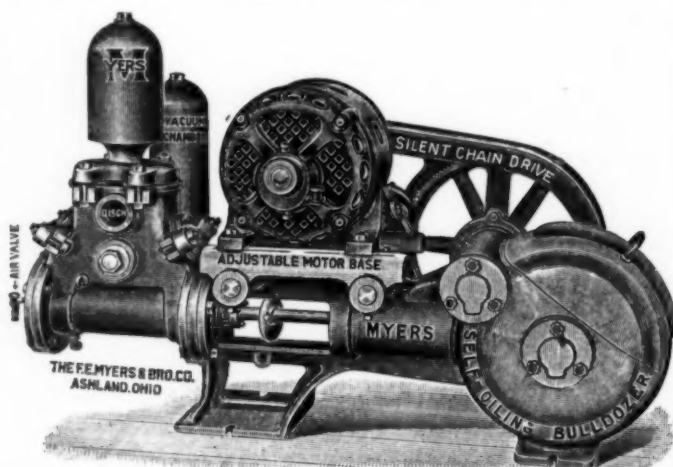
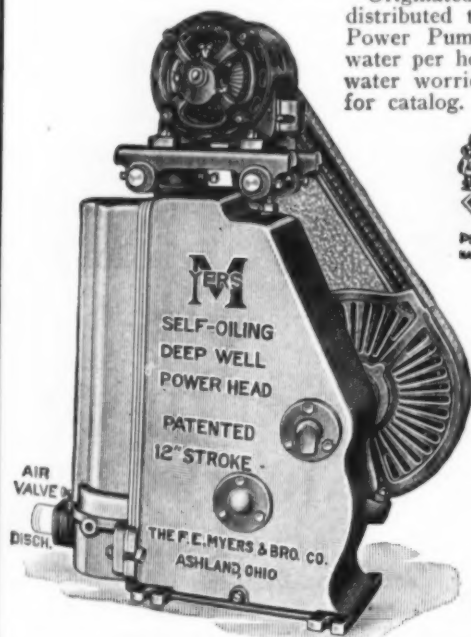
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Engineer: Eadie, Freund & Campbell, New York City
Plumbing Contractor: Jaehnig & Peoples, Newark, N. J.
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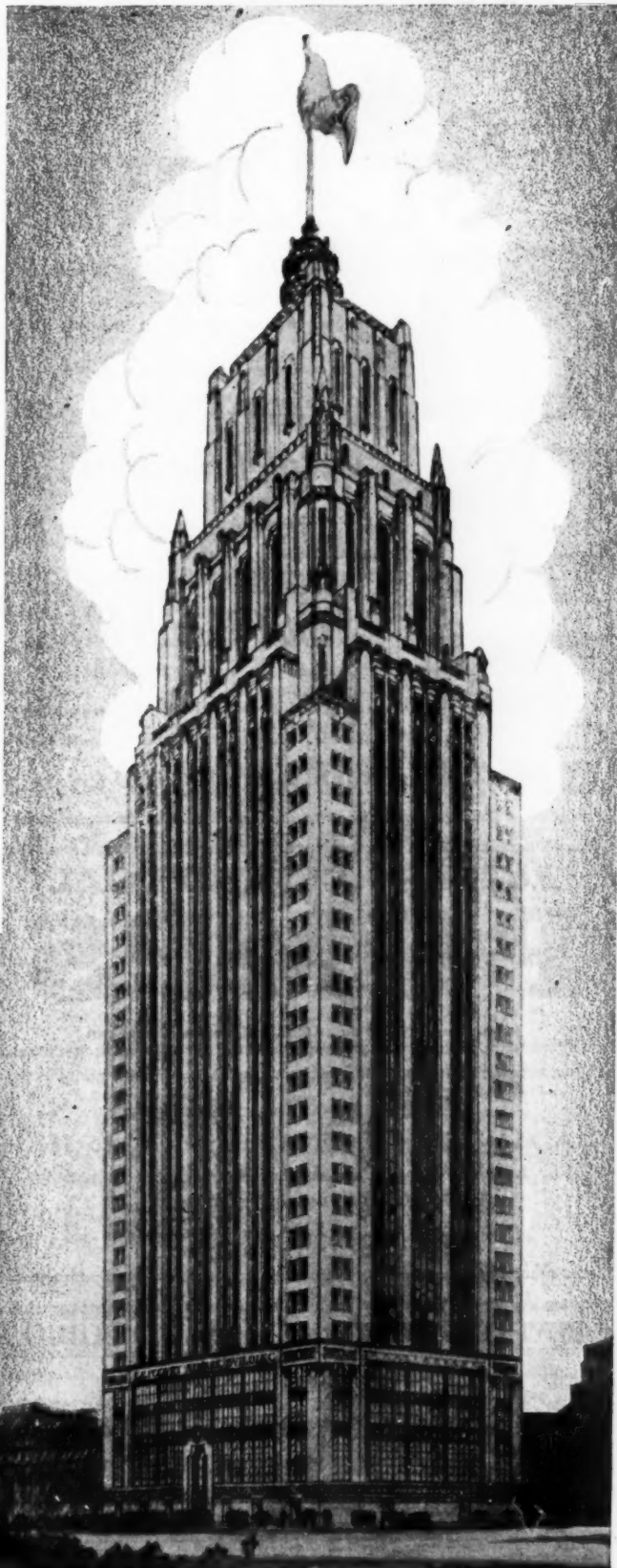
Thus, as in many previous instances, they chose NATIONAL for the major pipe tonnage. In addition to NATIONAL Pipe for the heating, soil and waste lines, they specified NATIONAL Copper-Steel Pipe for the vent lines and rain leaders as an additional protection against atmospheric corrosion. Many years of experience and numerous service tests have proven that copper-steel pipe gives added life to those lines exposed to alternate wet and dry conditions. Write for Bulletin No. 11, describing—

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BULLETIN — 36

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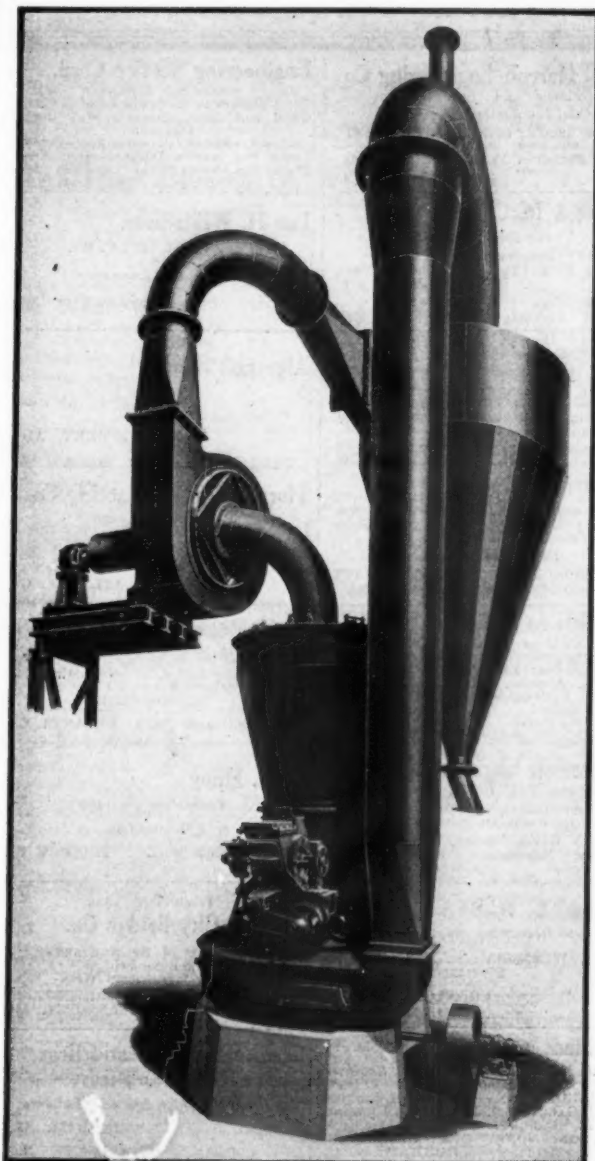
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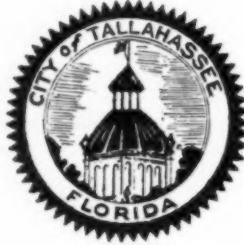
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No. 77A Send for Tool Catalog

July 3, 1930

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MAYOR COMMISSIONER
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WM R GALT,
CITY MANAGER
B H BRIDGES,
AUDITOR-CLERK

Manufacturers Record,
Baltimore, Md.

Gentlemen:

It gives me great pleasure to state that I believe that the Manufacturers Record is one of the best magazines of this description published and is indeed a true "Exponent of America."

On a number of occasions I have been glad to advertise in the Manufacturers Record for material and machinery from which we have always received competitive bids.

I have also referred to the Record in a number of instances in making purchases for the city, which have been to our advantage.

Yours very truly,

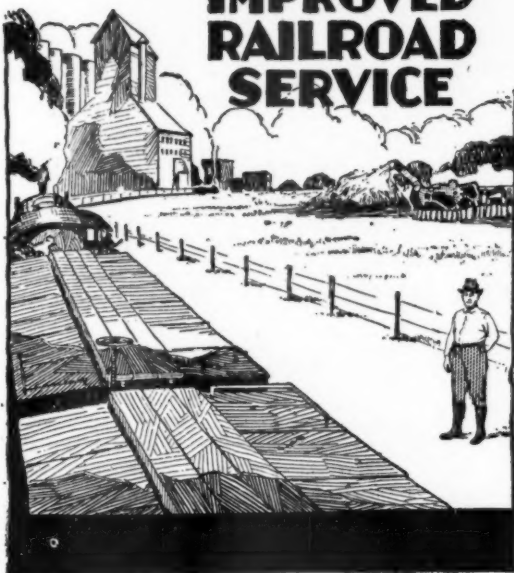
Wm. R. Galt,
City Manager.

WRG/b

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FOR OTHER INVESTMENT USE

AS RESULT OF
IMPROVED
RAILROAD
SERVICE



The entire system is dependent on exceptional railroad transportation and the railroads are justly entitled to a share of credit for the benefits that have resulted. That there are real benefits no one denies. And we know now that over any period of time the volume of business transacted is as great or greater under the present system as under old methods.

Sometimes it seems that the public is so accustomed to the conveniences of modern railroad service that it seldom, if ever, recognizes the fact that even the most simple purchase contains the romance of industry, commerce and human progress. There is hardly a commodity in daily use that does not reflect the combined services of a great many people and few realize how much of that service is performed by the railroads and what a small portion of the consumer's dollar ever goes to the railroads for their services.

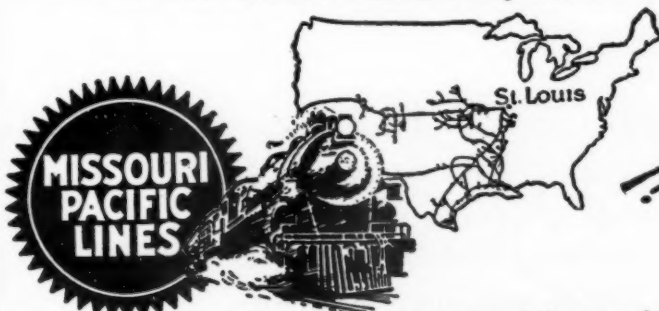
A case in point is the consumer's dollar spent for bread. Some interesting figures have just been compiled showing that the producer gets 28.1 cents of the dollar. Transportation of the wheat represents 2.6 cents. The elevator margin is 2.8 cents. The flour manufacturer gets .6 cents. The transportation of the flour represents 4.4 cents. The bread manufacturer gets 12.3 cents. The selling cost is 16.4 cents, the "overhead" chargeable to manufacturing is 8.5 cents and the profit accruing to those engaged in manufacture of bread is 5.7 cents. The operating cost to the retailer is 15.7 cents and the profit margin to the retailer is 2.9 cents.

Super-service on the part of the railroads is an essential necessity today. The Missouri Pacific Lines appreciate this and will continue to exert their best efforts to this end that the public may have the reliable, dependable railroad transportation that it needs and must have.

IMPROVED railroad transportation is enabling manufacturers in the state of Illinois alone, to successfully carry on their business with reduced inventories that total \$420,000,000 annually. On the basis of a total value of approximately 80 billions of dollars—the estimated annual value of all manufactures in the United States—this means that improved railroad service is saving American business at least the equivalent of the interest charges on five billion dollars. The reduced inventories in Illinois were effected out of a total annual volume of business that is slightly less than six billion dollars.

Not only have the interest charges been saved. The amounts not needed in inventories at both the originating and receiving ends of the line and in transit, are released for constructive investment. Without a doubt this has been an important factor in our sustained prosperity. It is one of the most important reasons the country did not suffer from panic conditions following the readjustment of security values last winter. Very few if any businesses were caught with large stores of materials or stocks of goods on hand; consequently it was not necessary to "write off" huge losses as formerly happened. It will be remembered that there was virtually no readjustment of commodity prices to accompany the lowered security values.

So-called "hand-to-mouth" methods of doing business now are vital factors in our entire industrial and economic scheme of things.



I solicit your co-operation
and suggestions.

M. B. Bachman
President

"A Service Institution"

Availability

of raw materials and plentiful fuel have made the manufacture of stone, clay, and glass products an industrial group of growing importance in Alabama. Common brick, valued at \$1,463,986 were produced by 26 Alabama plants in 1927. Of the 127,397 tons of domestic clay mined and sold in 1927, 120,831 tons were fire clay. Lime making, centering principally around Shelby County, has gained wide recognition for the quality of its chemical lime. Marble of superior quality is produced in Talladega County, and oolitic limestone in Franklin County. Sandstone is of general occurrence and is widely quarried. Total production of stone sold or used in the State in 1927 was 1,238,750 tons, valued at \$1,797,375.

***T**HIS is an extract from a comprehensive survey of Alabama, made by the Alabama Industrial Development Board. Copies of this survey will be furnished responsible individuals upon request. Address: Alabama Industrial Development Board, Brown-Marx Building, Birmingham, Ala.*

This advertisement published through the courtesy of the Alabama Power Company, whose New Industries Division is actively cooperating with the Alabama Industrial Development Board in finding profitable locations for new industries in Alabama.

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ARKANSAS TEXAS



Offers many advantages to the Textile Industry

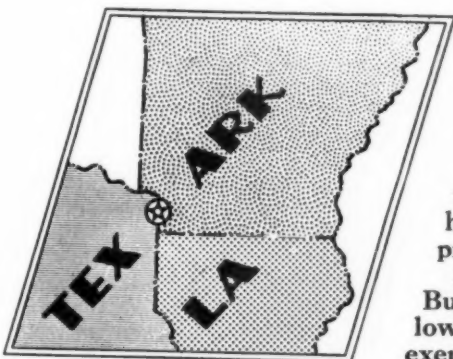
TEXARKANA, with a combined population in the twin cities of 30,000, of which 70% are native born whites, is an industrial city, with an adequate supply of female white labor.

In the center of a large cotton producing area, with choice of the state laws of Arkansas or Texas for incorporation purposes, and labor laws in both states favorable to the textile industry, Texarkana offers unusual advantages for the location and operation of textile mills.

Here there is an abundant supply of natural gas for fuel at low rates for both domestic and industrial use. Remarkable highways and transcontinental railways provide direct transportation to all markets.

Excellent plant locations are available. Building costs are at low ebb. Unusually low fire insurance rates are in effect. Tax exemption is offered on the Arkansas side for a period of seven years.

The Industrial Department of this company will be glad to send you a copy of the recent survey, "Texarkana and the Textile Industry."



Little Rock Gas & Fuel Co. — Southern Cities Distributing Co.
Public Utilities Corporation of Arkansas — Arkansas Louisiana Pipe Line Co.

ARKANSAS

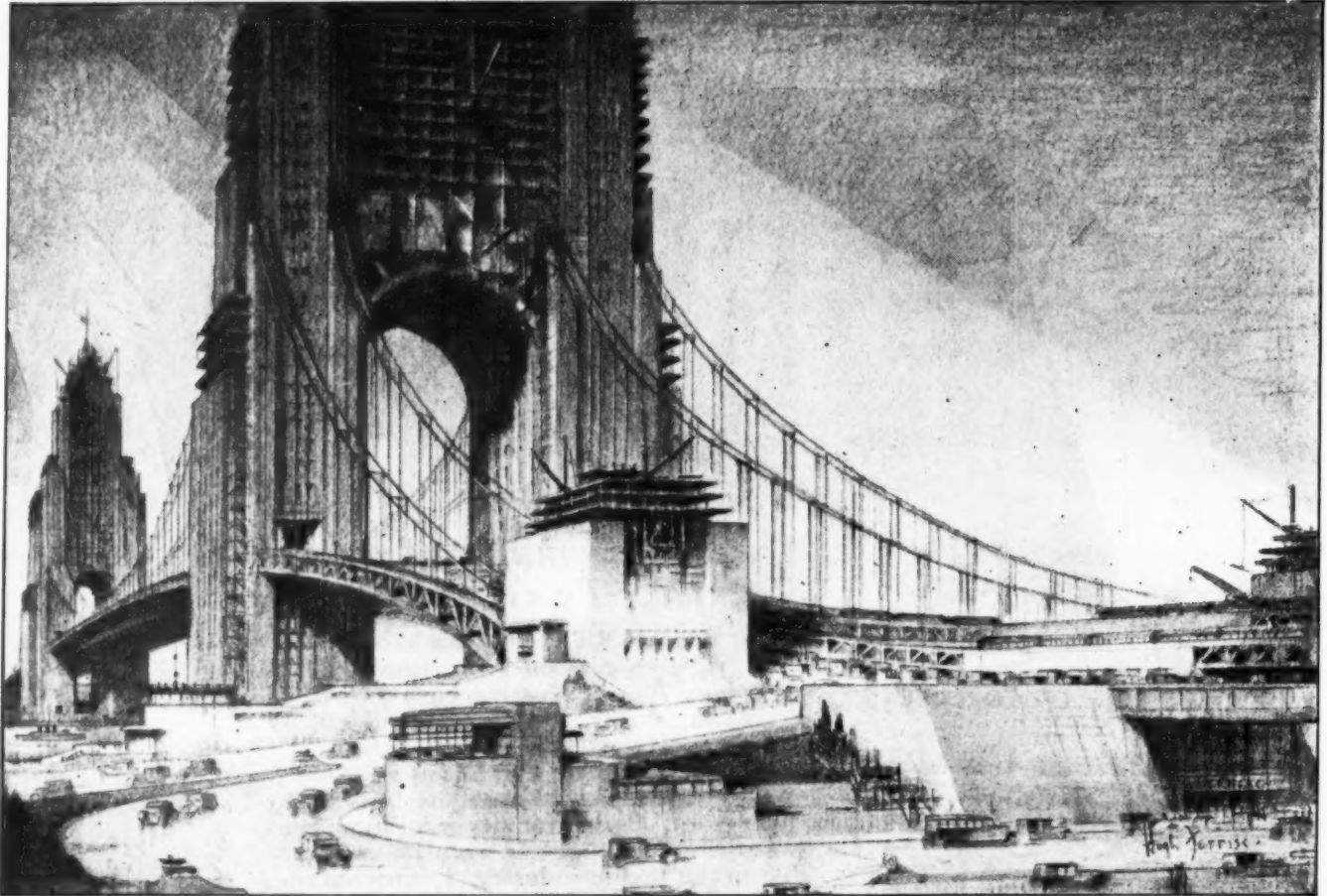
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A Cities Service Subsidiary

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The co-operative non-profit service organization of the structural steel industry of North America. Through its extensive test and research program, the Institute aims to establish the full facts regarding steel in relation to every type of construction. The Institute's many publications, covering every



phase of steel construction, are available on request. Please address all inquiries to 200 Madison Avenue, New York City. District offices in New York, Worcester, Philadelphia, Birmingham, Cleveland, Chicago, Milwaukee, St. Louis, Topeka, Dallas and San Francisco.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

STEEL INSURES STRENGTH AND SECURITY

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Baltimore, Md., July 3, 1930

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MANUFACTURERS RECORD

RICHARD H. EDMONDS, Editor

MAIN OFFICE

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Commerce and Water Streets,
Baltimore, Md.

Published Every Thursday
by the

MANUFACTURERS RECORD
PUBLISHING CO.

BRANCH OFFICES

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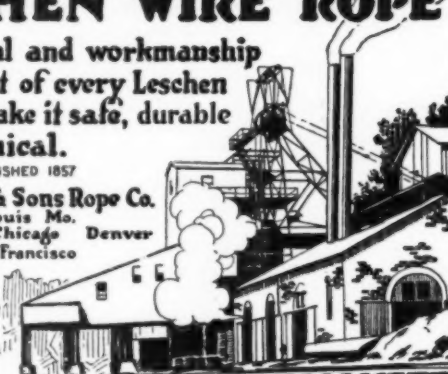
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The material and workmanship that is a part of every Leschen Wire Rope, make it safe, durable and economical.

ESTABLISHED 1857

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St. Louis Mo. New York Chicago Denver San Francisco

All Leschen Steel Wire Rope is made of Acid Open Hearth Steel Wire



<p>No. 10 Ball Bearing Punch</p>  <p>Weight 9 1/4 lbs. Capacity 3/4-inch hole through 1/4-inch iron.</p>	<p>No. 455 Angle Iron Combination</p>  <p>Capacity 2"x 2"x 1/4" angle iron. Weight 225 lbs.</p>
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117 FORBES STREET ROCKFORD, ILL.

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For satisfaction and long service



Write for catalogue and consult our Engineering Department on your spring problems.

RAYMOND MFG. CO.
Corry, Pa.

Texas Garment Factories Grow in Number And Importance

EACH year more thousands of Texans wear more and more Texas made garments, from the crowns of their heads to the soles of their feet.

Texas garment factories are forging ahead with a profitable market constantly growing in their front yard.

Opportunities exist here for many lines in the textile industry. Through eighteen years of dependable and continuous transmission line electric power service to a growing group of progressive Texas cities and towns, the Texas Power & Light Company is in a position to give you reliable and helpful information regarding textile opportunities in Texas which might prove to be valuable to you. Communicate with us with specific requests and we shall be pleased to give you prompt and full reply.

Texas Power & Light Co.
General Offices Interurban Building
Dallas, Texas

Manufacturers Record

Reg. U. S. Pat. Office

Devoted to the Upbuilding of the Nation Through the Development
of the South and Southwest as the Nation's Greatest Material Asset

Vol. XCVIII No. 1 }
Weekly }

BALTIMORE, JULY 3, 1930

{ Single Copies, 20 Cents.
{ \$6.50 a Year.

Political Animositities Endangering American Business

A PLEA for unity of constructive action rather than destructive criticism, a declaration for a moratorium on partisan political criticism of the administration in power has been made by one of the country's leading steel manufacturers. This man is head of a great organization which sells in the world's markets, and surely that company has as much at stake in the realm of business as any other concern in the country. This manufacturer voices the growing sentiment that the political "sharpshooters" have gone beyond the bounds of sound business judgment in a display of animosity against the chief executive of the nation, a hostility that is becoming increasingly harmful even to the point of undermining American business security and prosperity. Were it not for the seriousness of conditions which have developed in recent months, the efforts of some persons deliberately to throw every obstacle in the way of the administration's moves to help business would be viewed as an absurdity.

It is time to call a halt; time that petty politics were laid aside; time that every citizen gave wholehearted cooperation and support to orderly government procedure, that we as a nation may measure up to our destiny so that our future prosperity may be unmarred and our people continue to enjoy the fruits of their labor to a degree greater than ever before known. But let George M. Verity, chairman of the board of the American Rolling Mill Company speak for American business and American labor in the following statement to the MANUFACTURERS RECORD:

The American Rolling Mill Co.,
Middletown,
Ohio.

George M. Verity,
Chairman.

June 21, 1930.

Editor Manufacturers Record:

In viewing our national situation as it exists today, I feel that your virile Americanism and outstanding patriotism can be used at this time to impress the citizens of this great country with the very great need for being honest, unselfish and broadminded in the consideration of all great public problems.

We must diminish our partisan mindedness and our selfish sectarianism in the interest of the common good, or we shall materially lessen the periods of sound prosperity that are so fully possible in the future.

We should first evidence such broadmindedness by more loyal support of the national administration which we choose from time to time, instead of handicapping them in every way as we have done in the past and are doing today to an extent never done before. Where are we as a nation going to get by any such narrow partisan or selfish individual policy?

We have at this time a chief executive whose integrity is unquestioned. He is able, broadminded, patriotic and thoroughly conversant with business conditions and with the economics of business, and he understands the world situation as it exists today. He desires to act in everything in the best interest of the nation and of its future prosperity.

In following up a campaign pledge he presented the tariff problem to Congress.

This tremendously important problem was given every consideration possible under the political conditions that exist and which he cannot change.

The tariff is one of the most difficult and impossible problems with which an administration and Congress has to deal.

It is not possible under conditions existing today, at home and abroad, to enact any tariff satisfactory to any considerable group, as we can assume that each and every group is looking at the matter largely from a selfish standpoint; in other words, they think they are fighting their own battles.

However, the President did insist on the inclusion of "the flexible provision" which enables a Tariff Commission with his advice and assistance to so modify or adjust any particular schedule as in their judgment is in the best interest of the nation. How could we have this whole matter in better shape?

We can assume that the provisions of the enacted tariff will be adjusted as rapidly as the President and the Tariff Commission can act intelligently.

Any item adversely affecting a friendly nation, and not in the interest of our own country, will

surely be modified in the end so that we may have the best that can be done in defense of our national interests and of our high standards of living, which must never be lowered.

The tariff is now safely out of partisan political administration and it is no longer a matter of contention and of doubt.

Business can and will go ahead, and if our citizenship as a whole will but do its part in loyal support of our national administration, of our great resources and of our unlimited initiative and constructive ability, nothing can stop the tide of our continued progress.

Every basic national industry is in a sound condition and ready to use its productive and constructive powers to the limit, just as soon as this ever-recurring but temporary period of adjustment has passed, as it will within a comparatively short period of time.

Let us get behind our national administration and we will soon be going ahead as we have never done before.

GEO. M. VERITY.

In thus presenting the viewpoint of American business, Mr. Verity offers constructive suggestions which, although obvious to many people, need to be impressed upon the consciousness of the majority. We believe that Mr. Verity has stated the crux of the whole situation. President Hoover has had the misfortune to incur the animosity of politicians without and within his party—unjustly in many instances it seems to us—until it has reached a point where almost every constructive administrative suggestion and move have been opposed. As a consequence, a long step has been taken toward undermining American business confidence. It is to be hoped that the usual fair-mindedness of the American public will ultimately assert itself and that such a condition will not long continue. As a nation we are endowed with an open-mindedness that sooner or later—and we believe very soon, because signs of it are already noted—will enable us to grasp the true significance of the situation and as a result there will come about a unity of purpose for constructive action that will promptly lead to business stability.

The tariff bugaboo should no longer frighten business men of mature judgment. Secretary Mellon, whose knowledge of the workings of the tariff for many years can hardly be questioned, recently showed that there is no ground for the fears expressed by today's pessimists as to the results of the new tariff law. Other upward revisions of the tariff brought no business calamities to this nation, but were incentives for greater progress. And yet when the previous tariff law was enacted, in fact when every other protective tariff measure was adopted, the calamity howlers have predicted disaster for America.

An analysis of the present law, in comparison with the Fordney-McCumber tariff, discloses that under the latter there was admitted free 63.8 per cent of our total imports. The new law will admit from 60 to 63 per cent, which means that three-fifths of all our purchases abroad will continue to come in without duty. For the remaining two-fifths, the flexible provisions of the new law permit any importer, or his

representative, to appeal to the Tariff Commission for redress if the duty levied is in excess of the cost of products here and abroad. On the Tariff Commission's recommendation, the President is empowered to lower the duty in any such case up to 50 per cent.

Owen D. Young recently stated before the National Electric Light Association:

"We need to sell our surpluses abroad and an increase of foreign purchasing power will facilitate such sales. But to lower our tariff rates sufficiently to admit a flood of lower-cost products to compete with our own would not contribute to raising wage and living standards abroad, but, on the contrary, would lower our own standard."

The press of the country is awakening to the fact that we are deferring the return of prosperity by continual wailings and by a puerile display of shaken confidence in America's future.

The Birmingham News well says, "Business Nervousness Should Be Thrown Downstairs." Applying its own text to the situation in Birmingham, it adds:

"Birmingham didn't happen. It is the creation of builders who realized that no superstructure could be too great for the enormous wealth at the grass roots.

"To speak of these things is not to practice hypnosis, it is not whistling in the dark.

"To speak of these things at this time, and to face forward in serene assurance that this giant Birmingham is but resting its muscles before making more heroic adventures in building and industry, is but common sense gathered from the lessons of the recent past."

The Anniston Star editorially admonishes thus:

"Better Business Around the Corner, We Should Invite It and Hold to It—It was not until business had reached almost to the danger point in its decline that a reaction set in and an upward trend became apparent."

Further the Star quotes L. A. Downs, president of the Illinois Central Railroad, who says:

"Business deflation has definitely reached the bottom and the pendulum is destined to swing upward with more volume coming from a greater movement of freight and passenger business during the last half of 1930."

It is time to quit grumbling; to take, like men, whatever losses we may have suffered and to face forward in the full belief of a great and growing land, with thankfulness in our hearts for our manifold blessings and a firm confidence in the future, based on the assured initiative and energy of our people and their accomplishments of the past. No truer word was ever spoken, nor more vital business advice ever given than that uttered by J. P. Morgan the elder, when he said "Be a Bull on America."

To Use Cotton Bagging

ARKANSAS farmers of Ashley County are reported to have made arrangements for the use of cotton bagging in baling their entire 1930 cotton crop.

According to an editorial in the Charlotte Observer, about 180,000 yards of cotton bagging will be required for the crop, estimated at 30,000 bales. The Observer suggests that cotton bagging for cotton bales is a logical proposition and expresses wonderment that it has not been adopted more rapidly by Southern ginneries.

South Carolina Lets Large Cement Contracts to Southern Mills

SOUTH CAROLINA is to be congratulated on the decision to place orders for more than 1,000,000 barrels of cement with American manufacturers. This latest development in the important road building program which the state has adopted will be of the utmost benefit to industry. Orders thus placed inspire confidence and will have a most important bearing on a revival of business activity throughout the South.

As vice-president and manager of the Lone Star Cement Company, Birmingham, J. W. Johnston, under date of June 26, writes the MANUFACTURERS RECORD as follows:

"The Lone Star Cement Company, with Alabama mills located at North Birmingham and Demopolis, has just received from the South Carolina State Highway Department confirmation of purchase contract for one-half million barrels of Lone Star cement, for use in road building during the ensuing year.

"While the price at which this cement was sold results in a low return to our Birmingham mill, the business was accepted in order to help keep our mill in operation and our employes at work.

"The State of South Carolina, by purchasing its cement requirements of domestic manufacture at this time, and by pushing its extensive road construction program forward with all possible speed, is contributing directly toward the improvement of business conditions in the South by providing employment for Southern labor."

The Signal Mountain Portland Cement Company, Chattanooga, Tenn., also, in a telegram to the MANUFACTURERS RECORD, June 27, stated that it had obtained a part of the South Carolina contract.

The State Highway Commission has confirmed the following contracts covering its immediate Portland cement requirements: Carolina Portland Cement Company, Charleston, S. C.; National Cement Company, Birmingham; Lehigh Portland Cement Company, Birmingham; Lone Star Cement Company, Birmingham; Pennsylvania-Dixie Cement Corporation, New York, and Signal Mountain Portland Cement Company, Chattanooga.

Also, the commission has adopted two resolutions of particular interest in view of the first announcement to buy foreign cement, which the MANUFACTURERS RECORD criticized as being an unwise move. Contractors will now be asked to use South Carolina labor and to purchase South Carolina materials as largely as possible and this policy will be adopted in future contracts. The second resolution proposes to "build our roads most expeditiously, without cessation in any direction."

The first resolution cites the fact that "the recent letting competition was so widespread and bids were so low that not even one South Carolina contractor was successful," and this is one of the grounds for requesting the use of local labor and materials as far as possible, by successful bidders.

Commendation of South Carolina by the Lone Star Company for patronizing American industry will be endorsed by every element of the American people. The MANUFACTURERS RECORD, in particular, is pleased that this contract will "contribute directly toward

the improvement of business conditions in the South by providing employment for Southern labor," as Mr. Johnston puts it, instead of stimulating near-pauper foreign labor in competition with American workers.

The American cement industry also is entitled to commendation for accepting business at "a low return," in order "to help keep a mill in operation and the employes at work."

Fomenting Racial Unrest

POSSIBILITIES of racial complications in the South indicated in the MANUFACTURERS RECORD, December 1, 1927, are viewed as almost certainties by the eminent political writer, Mark Sullivan, in a recent article in the New York Herald Tribune. Both Mr. Sullivan's article and the article in the MANUFACTURERS RECORD attribute negro unrest in the South to the activities of some white residents of other sections.

Citing the defeat of Judge John P. Parker, of North Carolina, for confirmation to the Supreme Court, largely "by the National Association for the Advancement of Colored People * * * an organization that apparently is not wholly or even mainly negro," Mr. Sullivan adds:

"That the National Association will focus its energies on conditions affecting negro participation in Democratic primaries in Southern states can be taken for granted.

"Again, as in the case of Judge Parker, the pressure will not come from Southern negroes, but from the North and rather more from whites in the North than from negroes. So far as the negro in the South took part in or took notice of what was going on (the Parker case), it was because he was stimulated from New York and Chicago."

Belief that the Parker case "may stimulate a revival in parts of the South of the race question as an acute political issue" is expressed in the Washington Post.

Both Mr. Sullivan and the Washington Post article might well have added further that many of those who are fomenting political unrest among Southern negroes are also inciting industrial discontent among both white and negro workers and laying a foundation for the same labor troubles which in part have compelled great industries to move from New England and other areas to the South.

The point actually has been reached at which the American South must act for its own protection. Leadership falls naturally on the press, the loyal members of both branches of Congress and the industrial executives of the South. The Southern people will respond almost instantly to such leadership.

The dangers are realized outside the South, as is proved in the articles quoted and in the testimony of other trained observers.

Remember!

A MOTOR vehicle traveling at a speed of only 10 miles an hour covers more than 14½ feet a second, or about half the roadway width of an average street. At 45 miles an hour it is traveling at the rate of 66 feet a second.

Greater Flexibility Needed in the Sherman Law

THE stabilization, as much as the conservation, of our natural resources is a problem that grows more acute with the passing years. In coal, oil and lumber, for example, the situation is most acute, as all are subject to more or less violent recurrent waves of overproduction, with consequent loss to many operators and to wage earners when temporarily thrown out of employment. Government ownership of these resources, in order to secure their conservation through regulated output and complete regulated utilization, is repugnant to American conceptions. Further government regulation is opposed by operators and many people not directly interested. Yet some method of production control seems desirable.

Plans for reduction of output by industry itself have been carefully worked out and proposed, only to be condemned as violative of the Sherman Anti-Trust law. The situation, then, is this: The development of the natural resource industries on the lines along which they seek to travel is blocked by a law; and waste and extravagance in the utilization of the nation's resources are a result. The Sherman law was designed to safeguard the public interest against monopoly; but the question arises whether in this case the public is being served altogether, or in some cases injured by it.

It seems settled that in some industries unrestrained competition is not in the public interest. Street railways and electric power companies are granted monopolies in their territories; but in return they must submit to rather rigid government regulation. The natural resource industries ask no such monopoly of markets, and protest against such regulation. Many men in their ranks feel that a certain degree of cooperative self-regulation should be permitted these industries, on the ground that such self-regulation would be exercised in the ultimate interest of the public.

This idea was expressed by William B. Greeley, secretary-manager of the West Coast Lumbermen's Association, at the recent annual meeting of the Chamber of Commerce of the United States, when he said:

"I think we can recognize a clear distinction between governmental regulation of industry, or governmental interference in industry, and a public finding by a public agency as to whether a proposal coming from industry itself is in the public interest or against it."

As Mr. Greeley says, the interest of the public demands many things besides low cost of service or commodities. It requires dependability, among other things, and it demands conservation of natural resources for the sake of posterity. He adds:

"We must seek to find, either in the interpretation of our present laws if that is possible, or in new legislation if that is necessary, this principle of an impartial determination as to whether or not a given course proposed by an industry to restrain the competition within its ranks is, or is not, against the public interest. If we could once secure the recognition of that principle, it seems to me we might find a solution for a number of these problems."

Mr. Greeley's idea is that of the American Bar

Association, which has proposed that "the Federal Trade Commission shall be called upon to decide whether or not a form of contract or agreement offered by an industry to restrict competition among its own members is, or is not, in public interest." According to this proposal, "whatever the Federal Trade Commission finds in that respect becomes an authoritative finding of fact which must be recognized by the courts. And, furthermore, any member of an industry which undertakes one of these agreements, within a finding by the Federal Trade Commission, is immune from prosecution individually until the principle of the agreement itself has been set aside by action of the Federal courts."

The Anti-Trust law as framed and administered has slowed down development along certain lines of public policy and of activity in these industries and, under existing conditions, further progress is made difficult. The proposal appears to point the way to orderly development, beneficial alike to the public and industry. It would eliminate the danger of prosecution for corporations and trade associations pioneering in good faith, without removing all restraint or relieving them of responsibility for actions that go beyond bounds authorized by the Federal Trade Commission.

It is in line with the policy advanced by Herbert Hoover when, as Secretary of Commerce, he urged self-government in industry through constructive development of trade associations. Much valuable foundation work for the evolution of some such policy has been done by strong trade associations, and the formulation and adoption of trade ethics in many cases has been a constructive step.

"Thousands of Tourists"

"TO obtain first-hand information about the six New England States for millions of motorists back home, a group of counsellors of the A. A. A. are on a two-weeks tour of this section of the country, the third enterprise of the kind," says the Boston Transcript.

Of 24 named in the party, six are from the South—from Richmond and Norfolk; from Morgantown, W. Va.; North Carolina, Houston in Texas, and Washington, D. C.

"This influx of touring secretaries is considered one of the sure signs that New England will be the mecca of thousands of tourists who perhaps had not considered such extensive journeys from the Middle West and South this year," the Transcript adds.

All of which is quoted to emphasize again to the South the tremendous opportunities open to it on this line, opportunities far more significant for the South than for any other section, but not yet fully cultivated.

The charities that soothe and heal and bless lie scattered at the feet of men like flowers.—Wordsworth.

Gas Industry on Threshold of Greatest Period of Development

Bright Outlook in Both Artificial and Natural Gas Fields Seen by Central Public Service Corporation Head—Due to Rapid Expansion of Demands for Gas as Fuel and Its Application to New Uses

By

ALBERT E. PEIRCE,
President, Central Public Service
Corporation.

*Based on an exclusive interview
with the MANUFACTURERS RECORD.*

PERHAPS at no time since its inception more than a century ago has the gas industry been talked about as much as it is today. On every hand one hears discussions of the probable future of the business and the opinions of even the most uninformed make interesting hearing. The reason for the country-wide interest is to be attributed to the growth of a new industry within an industry. The newcomer, natural gas, although considered in its infancy, is several decades along in years of recognition and "as old as the hills" in existence.

The gas industry as a whole is on the threshold of one of the greatest periods of progress it has experienced since the process of producing gas was successfully developed 125 years ago.

In the century and a quarter that has elapsed since the initial production of gas, the industry has grown year by year, although its progress at no time in this span has been spectacular. The increases in revenues in the last two calendar years amounting to 8 per cent in 1928 over 1927 and to 9 per cent in 1929 over 1928, are indicative of the normal rate of expansion.

Remarkable Growth in Face of Severe Competition

DEVELOPMENT OF THE GAS INDUSTRY to its present state of stability has not been accomplished without much hard work and at times no little inventive genius was necessary for it to proceed along the upward path. The incandescent bulb was the major obstacle in the path of progress. Upon its successful introduction as the successor to gas for lighting purposes, the industry had to cast about for other outlets for the production. When electricity first sprang into use for lighting, around 90 per cent of gas production was being used for this purpose. In the intervening 30 years,

Highlights of Gas Industry

¶ In 30 years the manufactured gas industry has converted its service from lighting, almost exclusively, to its present status, with 92 per cent of the gas output used for heating purposes.

¶ Only 1,000 uses of gas could be catalogued in 1913; the total uses to which gas is now regularly applied number 23,000.

¶ At the beginning of 1930 the industry was serving approximately 17,000,000 customers, an increase of 1,000,000 during 1929.

¶ The per capita consumption of gas at the end of 1929 was 70 per cent greater than in 1920.

¶ Sale of manufactured gas in the Southeast shows a greater increase than in other sections of the country.

¶ Extent of future developments in the manufactured gas industry is almost limitless.

there has been a very drastic change in this picture, and today 92 per cent of the gas output is being used for heating purposes. The success of the transformation is attested by the fact that during this period gas manufacturers have increased their output 400 per cent and their companies continued to show satisfactory earnings and dividends.

A peak for the gas industry was sup-

posed to have been reached in 1913. Since that year, the industry has developed many new uses for gas, there being now approximately 23,000 separate uses as against 1000 in 1913.

At the beginning of the present year, the industry was serving approximately 17,000,000 customers, an increase of 1,000,000 during the year 1929. Probably no more impressive figure can be presented to prove the success of the industry's laboratory work during the past decade than the fact that the per capita consumption of gas at the end of 1929 was 70 per cent greater than in 1920.

Big Gains Mark Development of Manufactured Gas Industry

IN 1929, THE MANUFACTURED gas industry was employing a capital investment of \$3,250,000,000, gross revenues for the year amounted to \$550,000,000 and sales totaled 535,000,000,000 cubic feet. These represented gains of \$250,000,000, nearly \$40,000,000 and over 40,000,000,000 cubic feet respectively over the preceding year.

Giant that it is, the gas industry in its present development has exhausted only two per cent of its realizable possibilities. The extent of future developments is almost limitless. To give an example, only five per cent of the present gas output is used for house heating. If five per cent of the present gas users were to employ gas for house heating, the country's consumption

would be doubled.

Exploitation of the recently perfected refrigerating process employing gas will add another huge sum to the total annual gas consumption. This and other new devices are being vigorously promoted by the industry's salesmen. Its research laboratories, fortified with large annual allotments for their expense, are developing new possibilities

along a thousand lines of investigation.

The logic of efficient utilization of the country's resources dictates greater employment of gas. Researches conducted jointly by the gas and coal industries demonstrate that in the average domestic use of coal only 10 to 15 per cent of the thermal efficiency of the fuel is utilized. The industrial consumer is somewhat more successful, obtaining an average of about 20 per cent of the realizable heat content. The maximum efficiency of this user of coal is about 40 per cent of the heat content. If coal is converted into gas, it has been proven that a thermal efficiency as high as 80 per cent can be reached, or just about double the maximum expectancy of the industrial coal consumer.

Advantages of Gas for Heating Purposes

THE MANY ADVANTAGES of gas, as contrasted with coal for heating, are apparent. Coal handling, storage and the problem of ash disposal are only a few. Our larger cities are demanding elimination of the smoke nuisance and gas heating is the most obvious solution of the problem.

Natural and Artificial Gas Partners in Great Expansion

NATURAL AND MANUFACTURED gas are partners in the great expansion which the evidence of the laboratories and business economies forecast. Each

of the two gases has its geographical advantages and limitations. Cost is the final factor. If artificial gas can be delivered to the consumer cheaper than natural gas can be pumped from the ground to his fireside, artificial gas will be in demand. Conversely, of course, where it is possible to deliver natural gas to clients at cheaper rates than could be established for artificial gas, natural gas should be sold. Fusion of the two types of gas will be most advantageous in some territories to which natural gas is to be piped long distances. The problem of combining the two is one that must be solved by the individual operator of the gas service.

There are one or two points concerning natural gas which are not thoroughly understood outside the gas industry. First, the consumer thinks of natural gas in the same breath with lower rates. Admitting that in certain localities this reasoning is justified, the fact is sometimes overlooked that there is great variance in the heat content of the two gases. Natural gas has the greater heat content, rating 1100 British thermal units per thousand cubic feet to 530 B.T.U. per 1000 cubic feet for manufactured gas. We in the business feel that this situation must be recognized if natural gas is to be accorded the proper cooperation in extending its scope. Gas is measured in the United States for rate-making purposes on the cubic foot basis. It is readily apparent that with

the great heat content of natural gas, the utility operator distributing this gas is being discriminated against if he is not allowed to establish his rates on the basis of heat units instead of volume. The thermal efficiency of natural gas being so much higher than coke or coal gas, it should follow that it is higher priced. Less of it is needed to perform a given operation than with artificial gas.

There need be no competition between developers and purveyors of natural and artificial gas. Location and the accessibility of natural gas to the community will govern the character of the supply.

Predicts Steady Advance in Both Artificial and Natural Gas Industries

ARTIFICIAL GAS PLANTS will always be with us, despite the romantic and stupendous development of natural gas in certain sections of the country. Central Public Service Corporation and its subsidiaries are partial to neither. At present, we are planning to convert to natural gas in several cities in the Southeast. In this same section our production and sale of manufactured gas has shown an increase in the past several months proportionately larger than these increases in other sections of the United States. We expect both types of service to show continued increases in our properties and in the nation at large.

Should Perpetuate Forests By Selective Logging

Forests that last indefinitely and sawmills sawing up these forests without ever running out of logs are pictured by the Forest Service, United States Department of Agriculture, in reporting in Bulletin No. 169 the results of a study of selective logging, which is described as the key to perpetual timber production. It means a partial cutting of the forest, involving judicious selection of trees to be felled in order to perpetuate and improve the forest and also to maintain or increase the profit. Lumbermen in the Lake States, with no virgin timber in prospect for cutting after present holdings are exhausted, must choose between going out of business in a comparatively short time, or taking steps to put their remaining stands on a self-perpetuating basis, states the Bulletin.

Costs of logging and milling as determined by the study indicate that in typical Lake State forests trees less than 12 inches in diameter are unprofitable to convert into lumber. By taking only the larger trees the lumberman gets a better profit and leaves many thrifty trees to grow for the next cut-

ting and to reseed the bare places. In the region investigated, successive crops of lumber can probably be harvested on this basis every 25 years to 30 years, it is said.

\$1,500,000 in Greenville Building

Greenville, S. C.—Construction projects completed, under way or projected here during the first part of 1930 are estimated to cost \$1,500,000, of which \$800,000 will be expended in the city proper and \$700,000 in areas around the city. Additions to the Union Bleachery have been completed at a cost of \$300,000, while a \$200,000 bakery for H. H. Clausens & Son, Augusta, Ga., and Columbia, S. C., is nearing completion. Equipment is being installed in the new \$175,000 Greenville County Hospital outside of the city, and W. L. Simpson is erecting a \$40,000 automobile building on South Main street. Other projects include a \$40,000 plant on South Main street for the Coca-Cola company; \$50,000 warehouse for the Piedmont & Northern Railway, recently completed, and improvements completed and under way on the school system to cost \$135,000.

\$1,178,000 Bid on Marine Hospital

New Orleans, La.—According to a tabulation of bids by the Treasury Department, Jas. A. Wetmore, Acting Supervising Architect, Washington, the low bid to erect a new United States Marine Hospital here was submitted by R. P. Farnsworth & Co., New Orleans, at \$1,178,000. The Shepard Elevator Company, Cincinnati, Ohio, submitted low bid at \$23,255, to install elevators. The proposed buildings will include a 5-story main structure, 3-story administration building, 4-story surgical ward, laundry, power plant, garage, refrigeration plant, officers' and nurses' quarters, workshops, storage building and other facilities. Construction will be of brick with slate roofs.

Builders and Architects to Meet in San Antonio

Two conventions will meet in San Antonio during 1931. The National Association of Builders' Exchanges is to meet in February, and the American Institute of Architects has set a tentative date for Fiesta de San Jacinto week.

What the Federal Farm Board Has Done in Its First Year for Southern Agriculture

By

GEORGE H. MANNING,
Washington, D. C.

WITH half the farms and one-third of all the productive acres of the United States located within its boundaries, the great agricultural South has a profound interest in the new national agricultural policy and the Federal Farm Board. The Farm Board becomes a year old this month and a review of its activities clearly indicates that one of its major fields for operation exists in the South.

This fertile region, growing over 50 per cent of the world's cotton, for years has been one of the foremost factors in the economic condition of the United States. Members of the Farm Board realize that in the South they have opportunity to work out an agricultural reconstruction that may make this vast domain not only the foremost producing area in this country, but also the foremost consuming area.

In any difficulties which may confront the Farm Board in its program to rehabilitate agriculture in the South, one of several factors which will tend to make progress more rapid and ultimately more complete is the marvelous industrial development in the South. Industrial centers are consuming centers for agricultural products. Where there are factories and mills, there is demand for milk, butter, eggs, fruits, vegetables, meats, and all the products of the farm. These industrial centers provide local markets and tend to absorb farm surpluses and avoid the necessity of shipping to distant markets.

There are those who question the prudence and justice of using millions of dollars from the Federal treasury—money collected from all the people in taxes—for the aid of special groups. Others assert that the whole program does violence to the laws of supply and demand and is, therefore, economically fallacious. Still others hold the view that in extending financial and managerial assistance to the cooperative marketing movement, the Federal government approaches perilously near to a socialistic paternalism altogether foreign to the traditions of individual initiative and self-reliance which heretofore have accounted for both the industrial and agricultural progress of the United States.

The argument of these respective views may be left to their proponents. All that is attempted here is briefly to indicate what the Federal Farm Board has done during its first year for Southern agriculture.

With cotton prices on the low level of the last few weeks, there has been quite a clamor that the Farm Board "do something about it." Yet, the board is not unduly excited about cotton prices, for the reason that a comparatively negligible amount of cotton now is in the hands of the growers. Most of it has passed out of the hands of the producer. The law imposes on the Farm Board the obligation to work for the benefit of the grower. The man who produces cotton, wheat, tobacco, peaches—he is the man whose interest the Farm Board would serve, and after his commodity has passed from his control into trade, technically speaking, the board has no legal concern with prices.

Prices at the time the cotton crop begins to come onto the market are quite another matter. Those are the prices which will be paid to producers and in those prices the Farm Board has a very lively interest. In general, prices are not the direct aim of this cooperative marketing program, which is to place the farmers in position where they can control the marketing of their commodities in an orderly way. Once the producers are so organized, the Farm Board feels that the price will take care of itself and always within limits will reflect the actual economic value of the product sold.

James C. Stone, vice-chairman of the Farm Board, says of conditions in cotton when the board began its work:

"There were some 15 cotton cooperatives in the South, handling from 20,000 to 350,000 bales each and all of them in competition. They handled about 1,000,000 bales out of the total grown. Our first job was to get these cooperatives on a sound financial basis; to get one selling agency to market the cotton for all of them and thereby cut out the competition between cooperatives themselves. For this purpose the American Cotton Cooperatives Association was organized, a \$30,000,000 corporation, farmer owned and farmed controlled." It was the third "super cooperative" or national sales agency organized with the approval and backing of the Farm Board. The first was the Farmers' National Grain Corporation to handle the marketing of cooperative grain. In that organization the South, with an-

nual production of wheat about \$150,000,000, corn more than \$600,000,000 and oats more than \$90,000,000, has a greater interest than generally is imagined. The second national sales agency set up was the National Wool Marketing Corporation.

Incorporators of the cotton association were: Allen Northington, Montgomery, Ala., representing the Alabama Farm Bureau Cotton Association; Sam L. Morley, Oklahoma City, the Oklahoma Cotton Growers Association; J. E. Conwell of Atlanta, the Georgia Cotton Growers Cooperative Association; Chas. G. Henry of Little Rock, Ark., Cotton Growers Cooperative Association; Tait Butler of Memphis, the Tennessee Cotton Growers Association; U. B. Blalock of Raleigh, the North Carolina Cotton Growers Cooperative Association; R. O. McCutchen of Bishopville, the South Carolina Cotton Growers Cooperative Association; N. C. Williamson, Lake Providence, the Louisiana Farm Bureau Cotton Growers Association; Gowan Jones of El Paso, Southwestern Irrigated Cotton Growers Association; Harry Williams of Dallas, Texas Farm Bureau Cotton Association, and Fay Sperry of Berino, N. Mex., Mesilla Valley Cotton Growers Cooperative Association.

Even before this, however, the Farm Board last October felt that cotton prices then current were too low. It announced a loan price and then lent money to recognized cotton cooperatives, so as to bring the total amount borrowed from all sources by such associations to 16 cents a pound on graded and classed cotton. The board announced that \$100,000,000 was available to cover these loans and if more were needed Congress would be asked to appropriate additional funds.

This action appeared to act as a stabilizing influence on the market for several months, but prices finally broke below the loan level. These cooperatives took delivery of much cotton, so that today they have approximately 1,000,000 bales of cotton against which loans were made up to 16 cents a pound. A stabilization corporation now has been organized to hold this cotton off the market, so that it will not be a depressing influence as the new crop comes on.

The real importance of all this is that in the first year of its work the Farm Board has set up complete machinery for the handling of cotton by the cooperatives. It has local cooperatives,

which are being strengthened daily; regional cooperative marketing associations; the American Cotton Cooperative Association, as a marketing agency for all the cooperatives, and finally it now has the stabilization corporation, to take from the market and hold any surplus cotton accumulated in the marketing activities of the American Cotton Cooperative Association.

Indicative of the way in which the Farm Board has extended financial aid to the Southern cotton cooperatives, the following loans are cited: Authorized for the Federal Cotton Association sponsored by the Staple Cotton Growers Association of Greenwood, Miss., commodity loan, \$5,000,000; Southwest Irrigated Cotton Growers Association, \$750,000; Arkansas Cotton Growers Cooperative Association, \$500,000; Mississippi Cooperative Cotton Association, \$300,000; Tennessee Cotton Growers Association, \$250,000; a facility loan to the Texas Farm Bureau Cotton Association of Dallas, \$500,000, etc.

The Farm Board now is working on the tobacco marketing problem, so far on educational lines. Intensive study also is being made of the potato and apple marketing problems, looking to the development of regional marketing associations for the several Southern producing areas. No effort is made to "force" organization in districts where producers are satisfied with present marketing conditions.

As the board outlines the program for the South, it is to solve the problem of the surplus crops and to back up the "cash crop" with enough general or diversified farming to provide the producer with a living so that the "cash crop" really will produce "cash." Mr. Stone points out that this means rather far-reaching changes in the credit system of the South, and reflects the hazards of "one crop" farming, with something approaching a crop failure in the one crop in each cycle of from three to five years.

"Eventually," Mr. Stone declares, "this program is going to develop more stable credit positions in the South and better quality of crops. In cotton, quality is becoming increasingly important. Foreign staple is going up and ours is going down. There has been in recent years improvement in the grade and staple of cotton in India and Russia and other foreign lands. We must meet and surpass that improvement.

"If the cooperative marketing movement can have satisfactory management for the next few years, you will see a new and more prosperous South and the Federal Farm Board will be crowded out of the picture. The producers will be in control of their commodities, they will have their own credit facilities, they

will have adjusted production to the reasonable demands and they will be approaching the economic security their importance warrants."

And a 7-cent duty on good quality cotton may help the South to improve its crop and raise more and better cotton on fewer acres.

Australia Raises Import Duties

Effective June 20, import duties on a number of products were increased in Australia; items thus subjected to higher duties include: Sirups, rice, piece goods, pipes, fishbolts, agricultural implements and dairy appliances, printing machines and presses, office appliances, machines and machinery not otherwise specified, refrigerators, locomotives, road rollers, wireless receiving sets and parts, tires and tubes, paper manufactures, cycle and side car parts (rims), tire pumps; certain vehicle parts formerly classified as chassis parts and now specifically enumerated and dutiable, as well as motor car door handles, catching and fastening devices, window winders, and other parts and accessories; tools and tool handles, lumber and clocks.

Completing Big Fire Brick Plant

Mexico, Mo.—Construction is well advanced on a big fire brick plant here for the Mexico Refractories Co. and operations are expected to be started in August. The Harrop Ceramic Service Co., Columbus, Ohio, is handling engineering on the kiln and is furnishing a car type tunnel kiln and drier. Contract for foundation and all concrete work was awarded to the George P. Reintjes Co., Kansas City, Mo.; for steel work to the Illinois Steel Bridge Co., Jacksonville, Ill., and for steel erection to Chappee & Wood, Alton, Ill.

\$1,500,000 to Improve Army and Navy Hospital

Hot Springs, Ark.—A bill authorizing the reconstruction of the Army and Navy Hospital here has been approved by the President and it is understood that construction will proceed on a unit basis—one unit to be torn down and rebuilt at a time, so that the hospital may function as the work goes on. The cost of the improvements is estimated at \$1,500,000.

Raleigh Reports Substantial Growth

By H. B. BRANCH, Secretary, Raleigh Chamber of Commerce.

Raleigh, the capital of North Carolina, has a population of 37,601, according to late census figures, an increase of 54 per cent over the 1920 figure of 24,418. The people live within an area of seven square miles.

Raleigh is the center of a large retail shopping area, the business volume having increased from \$33,750,000 in 1923 to \$40,175,000 in 1928. The 76 local wholesale houses do an annual business of \$12,306,000, while local industries have an annual manufacturing output valued at \$8,700,000.

With six colleges located in Raleigh,

the city is recognized as one of the educational centers of the South. Student enrollment is approximately 4500; officers and teachers engaged total 541.

The Curtiss-Wright Flying Service here maintains one of the South's best airports. This field is one of the two in the South approved as a flying school by the Department of Commerce.

For the 10-year period to 1929, \$30,000,000 was expended for building activities, an average of \$3,000,000 yearly. During the same period the municipality has expended \$3,000,000 for improvements.



A Recent View of Raleigh, N. C.

"A Road to Prosperity"

PRACTICAL study, by an industrial and business commission, of the causes of present unsatisfactory returns on investment, was urged by Charles F. Abbott, executive director of the American Institute of Steel Construction, Inc., in an address to the Steel Founders' Society of America in convention at White Sulphur Springs, W. Va., on June 27.

"A casual analysis of our industrial situation will show conclusively that in the majority of instances reasonable returns are not being obtained," was Mr. Abbott's opening sentence, and on this text he based his address.

Under present business operations "at a loss or without reasonable profit," Mr. Abbott declared that "our financial institutions are facing real hazards, our labor becomes involved because of possible unemployment and wage adjustments, our transportation systems feel the pinch." In fact, he added, "the welfare of all the people is vitally concerned, unless industry is capable of receiving a fair return on its capital investment."

According to industrial leaders, Mr. Abbott said, some of the causes for present conditions are inadequate legislation or obsolete laws, individual selfishness, obsolete plants and machinery and inefficient management and methods of distribution. No doubt all are contributory, he felt.

"The seriousness of the situation so closely allied to public interest should command the appointment of a council or commission, to consist of representatives of finance, labor, industry and economists, that would give intensive study to the situation and develop the real causes through fact-finding and then publish them as a semi-official indorsement which could be received by the public as the result of an impartial study by competent men, able and capable of determining causes," said Mr. Abbott.

"With such information at hand, a program of remedy or relief could be prepared and such action be taken as might be deemed advisable to insure or encourage profitable operation."

Somewhat more specifically, Mr. Abbott said:

"Today, industry is confronted with the Sherman Anti-Trust law, that is uncertain in its applications and its interpretations. Some of the restrictions were passed about 40 years ago to cover conditions existing at that time, but which now are obsolete. Unsatisfactory interpretations of the present law are confusing and no doubt contribute to the failure of industry to apply proper methods of control."

At first encouraged by the Codes of Trade Practices suggested by the Federal Trade Commission and adopted with enthusiasm, industry, said Mr. Abbott, had been stopped on this line by substantial disapproval from the Department of Justice.

Turning then to overproduction as one of the greatest hazards of the time, Mr. Abbott deplored the fact that industry was striving to work at 100 per cent capacity plants which had been enlarged in war time to an excess of consumption possibilities in peace times. This inspires competitive rivalry and methods that are ruinous to prices and fair profits, was his conclusion.

"The whole question is one that concerns every industry and it should be approached by a coordinated undertaking that would include all the interests involved," Mr. Abbott said. "Unless initiative is assumed by industry, then it is possible that we may experience a form of regulation or governmental control in order to insure prosperity."

"No far sighted business man wishes to encourage governmental interference in industry; yet if industry itself is to fail in its responsibility, the Government will undoubtedly insist upon some action to eliminate the deficiencies."

"It is suicidal to run to Congress every time we have a business problem. That is merely inviting paternalism, and paternalism is the rape of individual opportunity. Business men must learn how to regulate themselves, if they wish to avoid state socialism. Individual opportunity is economic freedom, it has been truly said, and if we deliberately sacrifice that we will be headed on the road to Russianization; we will sacrifice our political freedom."

In emphasizing the advantages of advertising, Mr. Abbott cited steel as an example. "To supplement efficient selling and the promotion of the market, you must not overlook the importance of a public understanding and recognition," said Mr. Abbott. "The ultimate consumer can be influenced to express a preference, if he has first been convinced on the point of superiority."

It is recognized as the right of the American consumers to have full liberty in purchasing such goods as they may wish to buy, and industry has no right to curtail that privilege of the purchasers, Mr. Abbott added. But, he continued:

"A manufacturer has just as much right to legal protection as has the consumer. He would be accorded as much protection from the vicious acts of his competitors as are the consumers."

The "thousands of industrial coopera-

tive organizations" now in existence were described by Mr. Abbott as "fearful to pursue any activity that might be questioned" under existing conditions. Their proper activities, he felt, should be clearly defined and they should be permitted to function in a constructive manner.

"We have entered a new economic era, where cooperation among competitors offers the only hope of meeting the new and changed conditions," said Mr. Abbott, and "those who refuse cooperation and prefer to go it alone can well afford to consider just what may be in store in the future if their insistence on riding free is to be continued."

A law in some countries compelling membership in industrial organizations was considered constructive, from an economic standpoint, by Mr. Abbott.

Among the subjects he suggested for consideration by trade organizations are: Standardization and Simplification; Codes of Trade Practice; Code of Standard Practice; Standard Specification; Educational Meetings; Standard Handbook; Cooperative Advertising; Research; Uniform Cost System; Sales Training.

"The era of narrow, selfish individualism is passing," said Mr. Abbott, at the close. "We must enter upon a new era of cooperation and cordial understanding between buyer and seller, producer and distributor and the individual units of our various industries. Only upon such a foundation can a sound economic structure be erected."

"Individuals and organizations alike must learn that neglect of the spirit of 'live and let live,' so ably expounded by the late Judge Gary, produces little but friction, heat, rancor and impairment of earnings."

Mississippi Released From Cattle Tick Quarantine

On July 1 the remaining counties of Mississippi under quarantine because of cattle fever tick were released from restriction by an order of the Secretary of Agriculture. The final clean-up of the State, which is the eleventh to gain freedom from quarantine restrictions, was made possible by a special appropriation of \$500,000 available early in 1928. To protect Mississippi from reinfestation by stray cattle from Louisiana, where the bug is not under control, the Mississippi Legislature has provided for construction of a quarantine fence along the State line. Quarantine regulations, also, are to be rigidly enforced.

A World's Bridge Building Record

FROM Newport News on the Atlantic to San Francisco and Seattle on the Pacific and from the Argentine Republic in South America to the Canada borderline is only part of the territory spanned by a Southern concern, in the form of construction of highway and railroad bridges. "We built that," the Virginia Bridge & Iron Company, of Roanoke, can say of many important bridges in that huge area. Also, the company does export work in Cuba, the Philippines, the Hawaiian Islands and occasionally in the Far East.

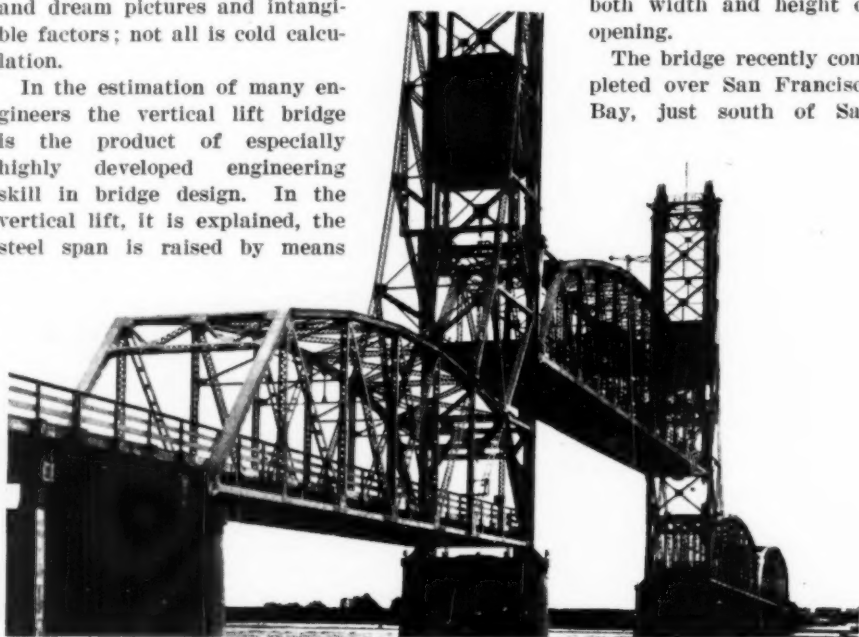
In construction circles the Virginia Bridge & Iron Company is regarded as one of the largest, if not really the largest, builder of vertical lift spans in the United States. The Mobile Bay bridge, at Mobile, 325 feet long, is reputed to be the largest lift span in the world, and close behind it are the James River lift at Newport News and the San Francisco Bay lift, each 300 feet in length, all three having been constructed by this Southern concern.

And one reason for the success of this company may lie in the fact that it finds "a certain romance and glamor in the building of large steel structures." Sketched into its blueprints, as it were in invisible ink, are imagination and dream pictures and intangible factors; not all is cold calculation.

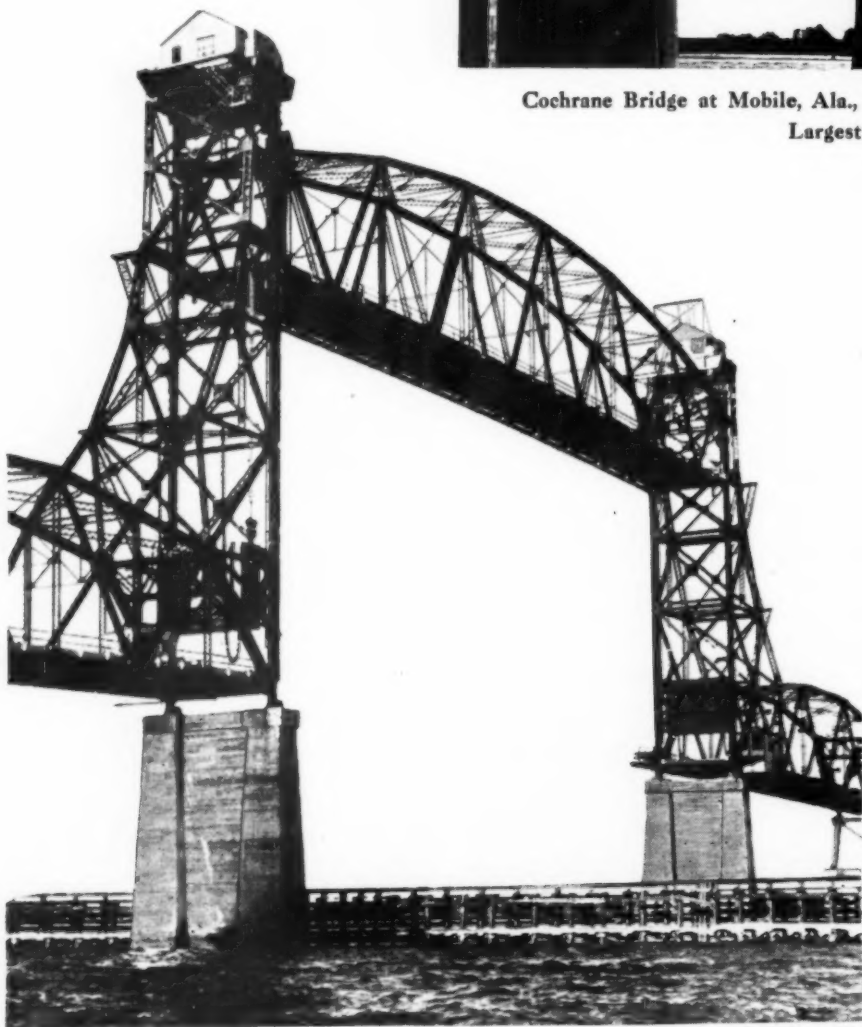
In the estimation of many engineers the vertical lift bridge is the product of especially highly developed engineering skill in bridge design. In the vertical lift, it is explained, the steel span is raised by means

of a system of counterweights, working over sheaves at the top of steel towers, and this type has been found highly appropriate for navigable waterways, where the Federal Government requires maximum clearances for both width and height of opening.

The bridge recently completed over San Francisco Bay, just south of San



Cochrane Bridge at Mobile, Ala., 325-foot Vertical Lift Span Said to Be Largest Ever Built.



300-foot Vertical Lift Span of James River Bridge, Newport News, Virginia.

Francisco and Oakland, is seven miles long and includes a number of steel spans, besides the 300-foot vertical lift. All was manufactured by the Virginia Bridge & Iron Company at its plant at Roanoke and was shipped from that point to the Far West. This bridge, incidentally, cuts scores of miles of travel from the old highway route from the San Francisco to the Oakland side of the bay.

At Seattle, Wash., an important bridge between Everett and Marysville also was fabricated at Roanoke, and the fixed spans, the vertical lift and several swing spans were shipped complete and in readiness to be placed in position in the structure.

The James River bridge, opened for traffic in November, 1928, is nearly five miles long, crossing the river just above its mouth at Hampton Roads. In this are a number of fixed steel spans, in addition to the great 300-foot vertical lift.

Outstanding among achievements of the company, up to the present, is the bridge over Mobile Bay, named the Cochrane Bridge in recognition of the work of John B. Cochrane, of Mobile, in active promotion of the project. The Cochrane Bridge includes two vertical lift spans, one of which is the world's present rec-

ord holder, at 325 feet in length, and these and a substantial tonnage of steel fixed spans were manufactured at the company's Roanoke plant.

Among other important bridge projects of recent date in which the Virginia Bridge & Iron Company has participated largely are the Cooper River bridge at Charleston, S. C.; the Pontchartrain bridge at New Orleans, and the Mississippi River bridge at Vicksburg. Besides this, there has been a continuous and general run of steel highway and railroad bridges throughout the South and Southwest, and in other sections and beyond the United States.

For this unlimited territory, and particularly for the South and Southwest, the company operates plants at Roanoke,

Memphis and Birmingham, its export business being handled through Hampton Roads and Gulf ports. Neither its domestic nor export work, however, is restricted to bridge construction, but also embraces steel structures of all kinds and structural steel for all building purposes.

Special features of design were required, for instance, in the First Trust and Savings Bank building at Pasadena, Cal., to make it an "earthquake-proof" structure. Also, on the far Pacific coast, steel work for the Spreckels Building in San Diego and the San Diego Trust & Savings Bank building was turned out from the company's plants in the South.

Recently the company has furnished a number of large airplane hangars for

the Pan-American Airways, to be located in Mexico and Central America, and also has filled orders for steel for electrical and rapid transit development in Brazil and Argentina.

For 35 years the Virginia Bridge & Iron Company has furnished and erected steel work in the South and Southwest, and scores of power houses, industrial plants, warehouses and similar structures stand as monuments to its construction enterprise, while the railroads also turn to it for steel cars and parts, and for material for their roadbeds.

The work of this progressive concern is under the guidance of C. E. Michael as president, and with him are associated John R. Parker as treasurer, H. S. Dance as secretary and R. L. Mastin as assistant secretary.

Zoning Progress in the South

Reports published recently by the Bureau of Standards show the statistical advance in adoption of zoning ordinances in states, counties and cities of the United States—probably the only fashion, unsatisfactory as it is, in which progress in this field can be tabulated. The tables showing adoption of new and revision of old statutes and amendments to state constitutions designed to facilitate zoning, indicate a very rapid spread of the tendency in the last half-dozen years. Today, every state of the 48 permits at least some of its cities to exercise some degree of zoning authority. In the United States 856 cities, towns and villages had zoning ordinances in effect the first of the year. Only 78 of these, or 9 per cent, were in the South, distributed among the states as follows:

Florida, 13; Missouri, 10; Virginia, 10; Oklahoma, 8; North Carolina, 6; Georgia, 5; Alabama, 4; Maryland, 4; Tennessee, 4; Texas, 4; Arkansas, 2; Kentucky, 2; Louisiana, 2; Mississippi, 1, and South Carolina, 1.

It is impossible to go about the growing cities of the South without being profoundly impressed by the destruction of values, and the ruination of the beauty and desirability of fine old residential sections through encroachment of garages, filling stations and stores. Many a handsome and cherished home, built to last for several generations, has gone down in a decade or two before the swift advance of business houses striving to get close to their markets—just a little closer than their competitors. But no sooner is success achieved in this particular than it defeats itself, for the market promptly starts moving

away, and the only result is a deterioration of real estate investment values.

Zoning is a serious problem to tackle in any city, and the larger the city, the greater the problem. Always there are selfish interests that rebel at any plan that may be proposed; and getting the zoning ordinance into operation does not end the battle. There are always business interests striving to secure exemptions and improper favors. Political pressure is brought to bear, and graft and corruption are the ever-present menace.

There is one city we know of—Kingsport, Tenn.—that has been soundly and sanely zoned from its inception. Kingsport was carefully zoned on paper before it was ever laid out on the ground, and it is a living demonstration of what zoning can do for a small city. To drive through it is a revelation. To own a home in it is to be entirely free from the menace that has impaired the value and forced the evacuation of so many thousands of homes in other communities.

Other towns and cities, as large as Kingsport or several times larger before zoning came to their ears, cannot hope to achieve in a few years the delightful arrangement that was possible to Kingsport—but in the course of many years' growth, if wisely and fearlessly zoned, they may achieve on a much larger scale what Kingsport has done in a small way.

By strict zoning, certain sections not already invaded by business establishments may be preserved forever as residential areas of great desirability, while other sections, already so invaded, will

gradually become altogether commercial and industrial.

Most Southern cities are still small enough to be zoned to great advantage, and happily a good many of them are making progress in this direction. Of the 78 Southern cities that have adopted zoning ordinances, 33 entered the group in the last two years. The results of zoning do not show up immediately, and it will be many years before the worst damage done to the appearance of some of those cities will be obliterated, but a generation hence, if their zoning ordinances are vigorously enforced, they will present a vastly different appearance, real estate values will have been safeguarded, and they will be better cities in which to live.

Power Line to Open Industrial Area

Norfolk, Va.—Plans of the Virginia Electric & Power Co. to build a high voltage power line by way of West Norfolk to Pig Point at the Nansemond army ordnance depot will result in opening a big area in the Western Branch district of Norfolk and Nansemond counties to industrial development. The new line will extend via submarine cables under the Western Branch, paralleling the West Norfolk drawbridge, thence along the West Norfolk-Churchland road to the crossing of the Southern Railway tracks and follow the railroad to the Duke property, from which point it will extend in almost a direct line to the ordnance depot. It is expected to be of special service to farmers in the community.

Power Farming in the Texas Panhandle

By the Use of Tractors, Combine-Harvesters and Motor Trucks the Big Job of Harvesting the District's 40,000,000 to 50,000,000-Bushel Wheat Crop Is Performed Quickly and at a Low Production Cost.

At one time included in what was erroneously termed the Great American Desert and later known as a big cattle range, the Texas Panhandle is now living up to the slogan, "Where the Wheat Grows and the Oil Flows." Simultaneously with oil developments of the past four or five years, the production of wheat has greatly increased. Through the use of tractors, new sod land by hundreds of thousands of acres has been put into wheat and crops have been produced in large-scale fashion at low cost per bushel by means of labor-saving equipment—tractor-operated tillage implements and seeders, combined harvester-threshers and motor trucks. It is a section where power farming holds sway and where wheat farms of 1000 acres or more are commonplace.

With an acreage in wheat at present estimated at 2,000,000 to 2,500,000 as compared to 711,163 acres from which the yield was 8,978,052 bushels in the 26 counties, as recorded in the 1925 United States census report, and with an estimated production for 1929 of 40,000,000 to 45,000,000 bushels which may go as high as 55,000,000 bushels in 1930, the Panhandle must be considered as a wheat-producing section of increasing importance. Moreover, it is well adapted to extensive use of labor-saving equipment to produce wheat at a cost considerably lower than that of many older producing sections. Also, sizable acreages are being planted to grain sorghums, corn, oats, hay and cotton. The live stock industry is still something to be reckoned with in the district.

Among Panhandle wheat growers deserving of special mention because of efficient use of up-to-date power equipment are the Gist Brothers of Happy, Texas, who last season operated a fleet of nine tractors and seven combined

harvester-threshers, all of McCormick-Deering make, and four International six-speed special motor trucks to farm a total of 3500 acres, 3000 in wheat and 500 acres in summer fallow. No horses were used, the only work animal being a saddle horse.

Some 1200 acres of the 3500 were farmed by five tenants. An interesting cooperative plan has been developed by the Gists for use of machinery on the tenants' places and for working these men in groups. The Gists get one-third the crop produced by the tenants, charge them so much for use of the machinery and pay them for their time when they are not working on their own places.

break 1000 acres of sod land. Although practically all farmers in the Panhandle straight-combine their wheat, Mr. Morris cut 500 acres of grain with a McCormick-Deering windrow-harvester and later harvested the crop with a combined harvester-thresher equipped with pick-up. He said he used the windrow-harvester because it enabled him to get at a crop eight days earlier. Possibility of hail damage was thus lessened, and he was able also to market much of his crop before some of his neighbors had begun their harvest operations. The remainder of the crop was combined in the ordinary way.

Many similar illustrations have been



International Harvester Six-Speed Special Motor Truck

Equipped with 60-bushel grain box that served two McCormick-Deering 16-foot combined harvester-threshers used to harvest 1500 acres of wheat last season for Ellom & Kellogg of Wildorado, Texas.

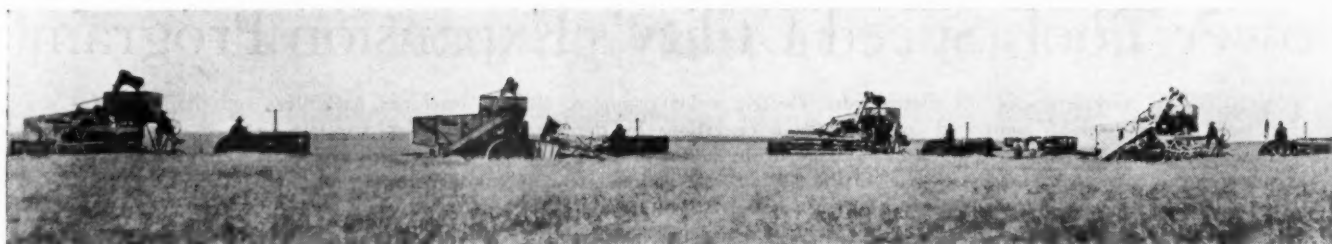
Thus the tenants are satisfied and the labor problem for the Gists is fairly well solved. Some equipment is also owned by the tenants.

C. L. Morris of Vega, Texas, another Panhandle farmer made good use of tractor equipment last season to produce 1000 acres of wheat, to summer fallow another 350 acres, and in the fall to

cited to show how Panhandle grain growers are preparing to break new sod land by the thousands of acres, how they work tractors day and night to speed big jobs and how they frequently produce crops at unusually low cost per bushel or per acre with fleets of tractors, fleets of combines and even with fleets of motor trucks.



A Fleet of Tractors Operating Harrow Plows on 3500-Acre Wheat Ranch Operated by Gist Brothers in the Texas Panhandle. Each Tractor Is Equipped with Front and Rear Lights for Night Operation.



Fleet of Combines Operated by Tractors on 2000-Acre Farm of E. J. Jewett, near Amarillo, Texas.

Home Modernization

By P. E. W. GOODWIN, Secretary, The Builders Exchange of Richmond, Va., Inc.

Much is heard nowadays about conservation. One of the most important conservation measures that our cities could devote time and thought to, at this time, is the conservation of obsolete homes, many of them capable of being modernized at a relatively low cost, and thus made tenable.

This is of importance not only from the standpoint of preventing the homes from falling into the "discard" and becoming a burden to the owner, for lack of a tenant, but also in preventing many good residence communities from being abandoned to undesirable tenants, and from becoming a source of uneasiness to the owners of adjoining properties.

Modernization covers a wide range and frequently includes a heating system, electric lighting, modern plumbing, new flooring and glazing, as well as improvements to the exterior, to add attractiveness to the home from the outside. It has been said that in many cities three out of every five homes are in need of modernization and that in some of the older cities the proportion is even greater, running as high as five out of seven.

Many cities have home modernization bureaus, and the results have been highly gratifying to those who fostered the movement. But, the results in many cases have been even more gratifying to the owners of the modernized homes, through greatly increased income from rentals. Also, many owners, after modernizing, have moved back into homes that they had previously lived in, because of the better class of tenantry occupying the adjoining homes.

This movement, in most cities, has been directed toward inducing owners of all the obsolete homes in a given block to undertake to modernize all the homes in that block, and in so doing it has saved them from a fate that would have meant large loss to the owners, and has made of them a distinct civic asset.

One of the best arguments that could be advanced in favor of modernization

would, naturally, be that it will create new business for the building industry, at a time when it is much needed.

Finally, modernization could easily be financed, because many obsolete homes are not mortgaged, due to the fact that many of them are in such condition that no one would care to lend money on them. The cost of modernization being low, it would not be difficult to obtain loans from building and loan associations and other financing organizations engaged in that type of lending.

An organization in every city to further home modernization might do much toward protecting and enhancing property values throughout the South.

Nation's Debtors Pay in Cash

Cash to the amount of \$117,141,598.24 was unexpectedly added to the Treasury funds in recent payments by 13 foreign countries on account of their funded indebtedness to the United States. The total was made up of \$45,786,467 for account of principal and \$71,355,130 for interest.

The payments in cash are noted by the Treasury in contrast with the practice among foreign countries of paying a greater part of the amount due in American securities, as permitted by the debt funding agreements. The cash payments "will have the effect of increasing the surplus for the current fiscal year," the Treasury Department comments, but "do not substantially affect our budgetary position," as all such payments must be applied to debt retirement.

New Rail Line to Dallas

Dallas, Tex.—The Interstate Commerce Commission has granted authority to the Louisiana, Arkansas & Texas Railway, of which C. P. Couch of Dallas is a vice-president, to operate into Dallas from Greenville, under trackage rights, over the Cotton Belt tracks. Ac-

cording to the plan approved, the entire freight business of the L. A. & T. would be handled exclusively by the Cotton Belt, interchange of traffic as far as possible to be at Dallas. Sam D. Goldstein, manager of the transportation department of the Dallas Chamber of Commerce, points out that the new line would open up much territory in Arkansas and Louisiana that has heretofore been more or less isolated from the Dallas territory. Direct service to New Orleans and other cities will be available also over the line.

Hillsboro Mirror Reflects Prosperity

Fifty years of publication of "a real newspaper, a clean newspaper," of which 42 years has been under the present management, are celebrated by the Hillsboro (Texas) Mirror in a "golden anniversary" issue of special value to its particular territory, also to Texas and to the South. Fourteen sections, of eight pages each, are required for detailed information on the advantages and achievements of Hillsboro and other progressive communities in Hill county and of the county itself, and the publishers' belief that it is the largest edition ever published in a city of 8000, seems well founded.

The Tariff Law Rates on Jute

The escape of an elusive decimal point from a paragraph giving the tariff rate on jute bags in the MANUFACTURERS RECORD, June 26, evokes a letter from Leavelle McCampbell, of McCampbell & Co., Inc., 320 Broadway, New York, courteously calling attention to its absence.

As Mr. McCampbell says, the item for jute bagging for cotton, weighing more than 32 ounces per square yard, reads "three-tenths of 1 cent a pound," and weighing from 15 to 32 ounces "six-tenths of 1 cent per square yard."

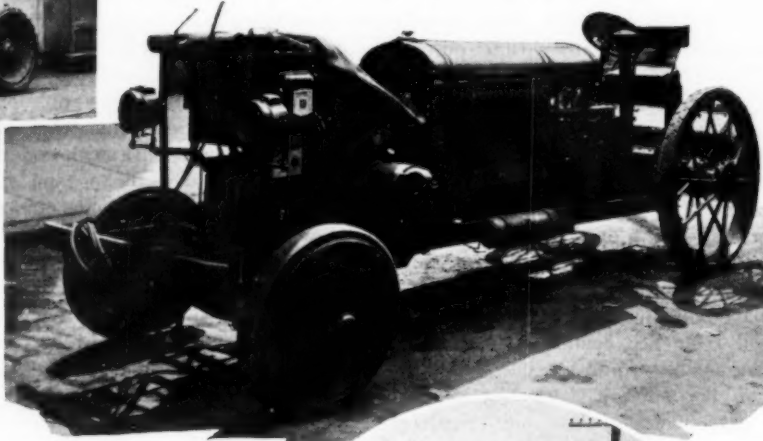
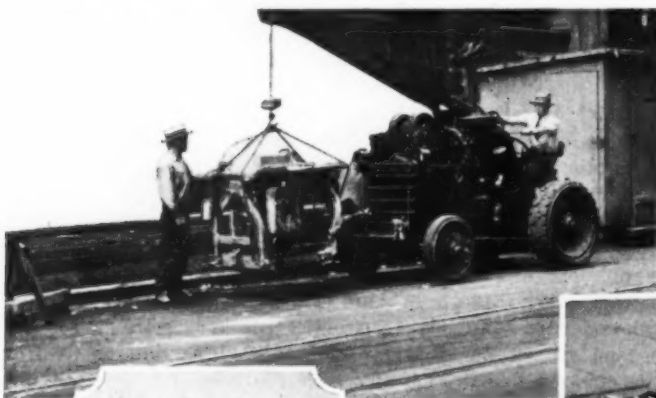
The six-tenths rate, Mr. McCampbell explains, "is ordinarily applied to bagging heavier than 32 ounces per yard, which is really a lower rate than three-tenths of a cent per pound."

Power Tools Speed Utility's Expansion Program

CONCRETE mixers, cranes, air compressors, electric welders, pumps, ditching machines, backfillers and similar equipment are extensively employed in construction operations by the Consolidated Gas, Electric Light & Power Co., Baltimore. Special use of such tools is being made in the laying of a big mileage of high pressure steam mains for heating purposes in the downtown business district of the city as well as for extending gas mains long distances to serve comparatively thinly settled rural areas. Such equipment not only plays an important part in reducing labor costs but makes possible the completion of projects in much less time than formerly when hand labor predominated and the workers' tools consisted principally of picks, shovels, saws and axes. Now high speed saws driven by tireless gasoline engines cut and rip boards as fast as the operator feeds the material through. Powerful trenchers excavate through the gravel and rock and throw the material out to one side. Cranes lower heavy pipes into place, easily and quickly. Backfillers put the dirt again into the trench and mechanical aids even compact the mass. Thus, are power tools taking the place of manpower.

Left—A Loadmaster crane, capacity $1\frac{1}{2}$ tons, manufactured by Frederic H. Poor, Inc., New York City, moving a portable saw rig manufactured by the LeRoi Co., Milwaukee.

Below—A Lincoln arc welder manufactured by the Lincoln Electric Co., Cleveland, Ohio, mounted on a McCormick-Deering tractor. Attachments are provided for long lighting leads to which low voltage electric lamp sockets are attached for illuminating trenches and tunnels at night.



Right—Crane, capacity 4 tons, manufactured by the Universal Crane Co., Cleveland, Ohio, placing cast iron pipe in trench. Also used for unloading flat cars where pipe is consigned to railroad points not equipped for unloading heavy material.

Left—A small type trench digging machine, manufactured by the Parsons Co., Newton, Iowa, which replaces hand labor in excavating trenches in outlying territory.



Above—A Gould power driven suction pump mounted on a Diamond T truck. The tank was made by the company's mechanics. A piece of similar equipment is a Danna pump mounted on a Ford coupe chassis; this tank was made by the Novelty Steam Boiler Co., Baltimore. Such units are used to pump liquid condensate from gas mains.

Right—A Rex mobile concrete mixer manufactured by the Chain Belt Co., Milwaukee, Wis.



New Roofing Plant at Savannah

The new Certain-teed Products roofing plant at Savannah was located at the meeting place of supply and demand, the demand for its products coming from the rapid industrial development of Savannah's trade territory. Asphalt, one of the principal raw materials, is obtained from a local source, the refinery of the Pan-American Petroleum and Transport Corporation, which is separated from the roofing plant by only a wire fence.

Asphalt is a by-product of the refining of crude oil, and of the raw materials used in the manufacture of Certain-teed roofing it is the one least desirable to ship. The others are felt, which forms the base of the roofing, and talc, mica and slate, for surfacing. At the Savannah plant, the asphalt will be pumped through a pipeline from the refinery to two 150,000-gallon storage tanks.

The essentials of the manufacturing process are extremely simple, but the requirements for a uniformly high-grade product add complications. The felt base must be saturated with asphalt and then given a tough, weather-resistant coating and finish. A machine 300 feet long, resembling a paper machine with its long procession of heavy rolls, takes in the raw materials all the way from one end to the middle and turns out the finished product at the other end. The dry felt is unwound from a roll and the asphalt, liquefied by a temperature of 375 degrees to 400 degrees, is sprayed on. Saturation must be complete. In the Miller process, used here, all the asphalt is sprayed on one side and must penetrate clear through. One ton of felt will take up 450 gallons of asphalt.

Second comes the application of a coating. This also is an asphalt, oxidized at the proper melting point and applied to the saturated sheet at a temperature of 400 degrees. As the sheet comes from the coating pan it is run between a set of rolls which can be minutely adjusted, so that the desired thickness of coating can be applied.

Next is the application of the surfacing, which may be of talc, of mica or of any one of several colors in ground slate. This surfacing is applied to the sheet while the coating is still hot, and immediately after the application the sheet is carried around a series of nine water-cooled drums. The drive of the drum is split into sections, so that one section may be slowed up over the other section; in this way a slight slippage is created while the sheet is traveling over the drums, causing a pressing-in effect which imbeds the granules into the soft coating.

One machine installed has a capacity of about 25,000 square yards of roofing material in an 8-hour shift. This will require about 15 tons of felt and 13,000 gallons of asphalt. In addition, if running slate, approximately 35 tons of surfacing materials would be used and, if running smooth surface roofing, five tons of surfacing materials. Space is provided for doubling the capacity of the plant by addition of another machine.

The entire plant is modern and manual labor is reduced to a minimum. Production is entirely on a streamline basis. The three main buildings, the dry felt warehouse, the manufacturing unit and the finished products warehouse, are arranged in the shape of a U, with the manufacturing unit at the center and the railway spur for both incoming raw materials and outbound finished products cutting across the top. In this way the felt is brought into one end of the U from the spur, passed through in a continuous process and returned to the spur from the other end. From the time the felt enters the machine until it emerges in rolls or cut into shingles and packed ready for shipment, no hand touches it.

The warehouse, which is laid out with 50,000 square feet of floor space, will be used to store other Certain-teed products, as well as the roofing made there. The plant frontage is on the Savannah River, providing water transportation facilities in addition to the railways serving Savannah.

Some interesting features of the plant, as described by A. B. Walton, assistant chief engineer of the Certain-teed Products Corporation, in the Stone & Webster Journal for May, are: First, instead of several machines for different products, only one is used, turning out either smooth-surfaced or slate-surfaced roofing, in rolls or in shingles, and in a hundred different weights, shapes and

colors. So flexible is the operation of the machine that, although the normal speed of the web through it is about 250 lineal feet per minute, it is possible for it to deliver one material to the packing conveyors and at the same time surface an entirely different material and have still a third material fed into the starting end. "And all this without break in the web or interruption of the machine or process," says Mr. Walton.

In the use of direct connected, synchronized, variable voltage motors for the drive, the main part of the machine consists of eight units, driven by eight motors. The speed of these is automatically synchronized so that, although the web passing through is continuous through the entire 300 feet of the machine, at no point does slack develop nor is undue strain put on the web due to differences in the speed of the different units. Besides this, the eight motors, still in synchronism, are capable of variation as a unit, from creeping speeds, for threading in, up to normal speeds producing about 16 shingles a second.

As asphalt congeals at normal temperatures, it must be kept at high temperatures from the time it arrives until it is applied to the felt. This is accomplished by the use of steam. The two 150,000-gallon storage tanks contain steam coils. From these storage tanks it is drawn into heating and oxidizing stills, the heating still being a tube still for the saturating asphalt, and four stills for the asphalt oxidizing to be used in the coating. In the tube still, the temperature is maintained close to 450 degrees by thermostatic control; in the oxidizing still, it is kept close to 475 degrees by operator control. In the latter, pre-heated air is blown through the asphalt to cause oxidation and produce the melting point desired in the coating.

From the stills, the hot asphalt is kept



Certain-teed Products Plant, Savannah, Ga.

flowing through steam-jacketed circulating systems, out to the machine and back again, the lines being tapped to draw off what is needed at the machine. This prevents any radical drop in temperature. Steam for this purpose is furnished by a 200-horsepower oil fired boiler. Electric power for operating the plant is purchased from the local utility company.

The plant draws its water supply from a depth of 554 feet by means of a 10-inch artesian well, with a capacity of 350 gallons per minute. Two high water tanks hold 100,000 gallons each, and these, together with a complete sprinkler system, provide protection from fire.

W. H. Artley, of Savannah, was the general contractor, and the materials and equipment used were furnished as follows:

Brick—W. J. Bremer, Savannah; 1,007,000.
Cement—W. J. Bremer; 5125 barrels, Lehigh Portland.
Gravel—W. J. Bremer, 2523 tons, from Alabama.
Structural Steel—Furnished and erected

by Steel Products Company, Savannah.
Tanks and Boilers—Made and erected by R. D. Cole Manufacturing Company, Newnan, Ga.

Electrical Work—By Industrial Electric Company, Savannah.

Pipe—American Cast Iron Pipe Company, Birmingham, Ala.

Sprinkler System—Furnished and installed by C. M. Guest & Sons, Anderson, S. C.

For Inter-American Highway

Washington, D. C.—The Bureau of Public Roads of the Department of Agriculture has opened an office in Panama City to aid Central American countries in making a preliminary survey to determine the best route for a proposed inter-American highway. E. W. James, chief of the division of highway transport of the Bureau, is in charge of organizing the work and has already sailed for Panama. Thomas A. Forbes and D. Tucker Brown, senior highway engineers, and Marcel J. Bussard, assistant highway engineer, will constitute the Bureau force of the Panama City office.

\$727,000 Low Bid on University Building

Washington, D. C.—A tabulation of bids by the Department of the Interior to erect buildings Nos. 1, 2 and 3 of a dormitory group for Howard University here, indicates that the Powers-Riddell Company, Philadelphia, Pa., submitted the lowest bid at \$727,000. The Walter W. Ballard Company, Washington, submitted low bid for furnishings, \$102,533.

Encouraging Tobacco Growing in Florida

Live Oak, Fla.—For the promotion of the bright leaf tobacco industry in North Florida, the Suwannee Warehouse Co. has completed a second warehouse in Live Oak, which has been leased to W. D. Whaley of Paducah, Ky. The old Suwannee warehouse has been leased to Henry B. Wadlington, of Hopkinsville, Ky.

\$6,500,000 Water Project

Construction Under Way on Two Dams Near Fort Worth

Fort Worth, Tex.—The following sub-contracts have been awarded in connection with the Eagle Mountain and Bridgeport dams of a \$6,500,000 flood control and water supply project near Fort Worth for the Tarrant County Water Control and Improvement District No. 1:

Drilling all sheet steel piling—Jacobson, Sweeney & Jacobson, Galveston, Tex.

Furnishing 48-inch valves and air valves in service conduits for both dams—Ludlow Valve Manufacturing Co., Troy, N. Y.

Caterpillar type crest gates for service spillways—Phillips & Davies, Kenton, Ohio.

Steel sheet piling—Carnegie Steel Co., Pittsburgh, Pa.

General contract for the work several

months ago was awarded jointly to the Trinityfarm Construction Co., Dallas; the McKenzie Construction Co., San Antonio, and the Uvalde Construction Co., Dallas. The first named company will do all excavation, earthwork and embankments, while the other two will handle the remaining construction. Approximate quantities of the principal items to be used in the Eagle Mountain dam will include the following: 484,000 cubic yards of wetted and rolled embankment; 150,000 cubic yards of core trench excavation; 2,360,000 cubic yards of hydraulic fill embankment; 56,200 cubic yards of rip-rap paving; 22,000 cubic yards of crushed stone; 5200 cubic yards of gravel roadways; 158,000

square feet of steel sheet piling ranging from 40 to 100 feet; 51,000 cubic yards of concrete; 32,000 barrels of Portland cement; 1,390,000 pounds of reinforcing steel, and 5000 acres of clearing.

Principal items on the Bridgeport dam will be used in the following approximate quantities: 1,390,000 cubic yards of wetted and rolled embankment; 115,000 cubic yards of core trench excavation; 25,000 cubic yards of rip-rap paving; 9600 cubic yards of crushed stone; 25,800 cubic yards of concrete; 31,000 barrels of Portland cement; 1,540,000 pounds of reinforcing steel, and 6000 acres of clearing. Hawley & Freese, Fort Worth, are the engineers for the district.



Conduit Excavation on Bridgeport Dam.



Embankment Work on Eagle Mountain Dam.

"Balance Production to Demand"

Night Work Declared to be Responsible for Unsettled Conditions in Textile Industry

DISCONTINUANCE of night work in cotton textile mills as a constructive step for the prevention of unsound overproduction was urged on the members of the Cotton Manufacturers Association of South Carolina by T. M. Marchant, president and treasurer of the Victor-Monaghan Company, Greenville, S. C., in his presidential address.

Especially would Mr. Marchant discontinue night work for women and minors, as a sound economic move, and "if voluntary cooperation cannot be secured" within the industry, he asked whether "it might not be more profitable to have uniform laws in all textile manufacturing States, to prohibit the working of women and minors at night." This, as he saw it, might "guarantee to stockholders a fair return on their investment," enable the payment of higher wages and "lift this industry out of what is generally known as the 'low wage' class."

On the other hand, Mr. Marchant also showed that this "low wage" was due largely to the industry's policy of preventing unemployment by paying part-time wages to a maximum number of workers, rather than full-time to a smaller number through laying off an appreciable percentage entirely.

First emphasizing the evils of overproduction, Mr. Marchant said:

"There never has been a time in the history of any industry when overproduction was not a curse, and it should be recognized as the greatest outstanding evil in industry.

"Drastic curtailment of production is not a sound practice, as we all know; but when capable mill executives turn a deaf ear to warning signals, then nothing but failure faces them, and the opportunity to put the industry on a sound basis is lost."

To overproduction, Mr. Marchant attributed "the present depression in the textile industry," short-time operation, non-profit prices, below-cost sales and the prevailing wage scales.

"In the future, there is one of two courses to follow," said Mr. Marchant. "First, to cooperate like business men, bring production in line with consumption and secure a fair price for this product which you and your stockholders are entitled to on your investment; or, second, continue to operate your plants on full time schedule, both day and night, regardless of supply and demand, and continue to sell your product at a loss, which will soon force the mills out of business.

"Night work in our cotton mills is

responsible for the unsettled condition in this great industry, and until we are ready to face these facts in an intelligent way and balance production to demand, this industry of ours cannot be put on a sound basis.

"Sentiment is growing throughout the Nation that balancing production with demand is vitally necessary, if this industry is to succeed. As I have said, drastic curtailment is economically unsound. Therefore, to guard against discontent on the part of the employees and to stop unfavorable legislation and bring about a more friendly spirit between employer and employee, I ask your personal consideration in working out some plan or program where the *discontinuance of working women and minors at night will be effected.*"

Indicative of the discontinuance of child labor in Southern cotton textile mills, Mr. Marchant said that a year ago 112 children between 14 and 16 years were employed in the five plants of the Victor-Monaghan Company, or about 3½ per cent of more than 3000 employees, while today there are only 18 children under 16 years in the five plants, and none under 15, and in a few months the company does not expect to have a worker in the plants under 16 years.

"I want to say most emphatically that I feel the cotton mills of South Carolina have been a blessing to the people of the State," Mr. Marchant added. "They have given continuous employment to a large percentage of our population and have brought people from the rural and mountain sections in close touch with education, religious and cultural advantages which they never could have enjoyed had they remained at their homes.

"It is encouraging to note the way in which our boys and girls in the mills are taking their places alongside the city children in scholastic events. Unquestionably, we should feel proud of the fact that we have done much toward the upbuilding of the character of our people.

"I feel that we are ready now for an intensive educational campaign along technical lines and that through the cooperation of our school system we should train all the young people who are entering our mills in the art of the industry, and that we should encourage public school systems to give training along vocational lines, as well as the textile department of Clemson College."

The growing of high quality cotton in the South and the payment of propor-

tionate prices for such cotton by the mills was urged by Mr. Marchant.

"It has always been a mistaken idea that low priced cotton means larger profits for cotton mills," Mr. Marchant asserted. "Experience has taught the manufacturers that when the farmers can secure a fair price for their products, and have ready funds to spend for the livelihood, there is greater prosperity for everyone. Why should it be necessary for cotton mills in this State to purchase the large percentage of their requirements from the West, when we have the right kind of soil in our State to produce almost any length of cotton needed?

"I would like to impress on you the importance of your being willing to give the farmers a fair premium for the better staple and thus show your willingness to cooperate with them in their effort to meet our demands."

Waste Phosphatic Sands Yield Commercial Concentrate

A laboratory investigation of gravity concentration of phosphatic sands now rejected as waste by washing plants in Florida has shown the feasibility of recovering 35 to 45 per cent of the phosphate content of the waste sands treated in a concentrate above the minimum commercial grade, 66 per cent bone phosphate of lime, now regularly marketed in the Florida fields. This work has been conducted by the Bureau of Mines, in cooperation with certain operators in Florida, the Missouri School of Mines and Metallurgy, and the University of Alabama. Significant as are these savings, utilization of products analyzing less than 66 per cent bone phosphate of lime would lead to still larger conservation. It is entirely within the field of probability that such reductions will take place in the coming years, states the Bureau.

Commercial applications of gravity concentration methods have been undertaken in the Florida land-pebble district by one company. A second concern is now investigating commercial possibilities of this process and others may consider its application to their own operations. Such a change in methods is to be encouraged inasmuch as conservation of the nation's resources of phosphate, due to increased recoveries of the mineral content of the ores mined, will result from application of these methods to beneficiation of materials now wasted.

LETTERS FROM OUR READERS

American Prices Based on High Wage Scale

Johns-Carroll Lumber Company
Hurtsboro, Ala.

Editor Manufacturers Record:

We read with interest your editorial in regard to the State of South Carolina purchasing 1,000,000 barrels of foreign cement and also the reply by the Chairman of the State Highway Department.

It would appear from the reply that cement, like several other commodities, is in a monopoly. For instance, steel or commodities made from steel today in our line are as high as they have been since war time prices, with the exception of one 10 per cent reduction which occurred some time during 1923 or 1924. What we refer to principally is circular saws and bits made of steel. In 1916 a 48-inch circular saw cost us from \$48 to \$60; it will cost today \$108; saw bits, 100 to the box, in 1916 were costing us from \$2 to \$2.25 per hundred; today they are costing us \$4.50 per hundred. The point we want to bring out is this: Is it justifiable to criticize our state governments for the purchases from foreign companies, where it is plainly seen that the monopolies are getting a real strangle hold on our industries?

We have been reading the MANUFACTURERS RECORD for the past eight to ten years and appreciate your stand and outspoken editorials.

A. B. CARROLL,
Secretary and Treasurer.

[Explanation of Mr. Carroll's query about the increased prices following the World War is found in the increased rate of wages paid to labor. High wages increase the cost of production, from the raw materials of the farm and mine to the most complex of manufactured products. If markets cannot be found at present figures, prices will drop, as they are dropping, and there is an added danger that wages of labor may be forced down along with the lower prices. When the immense buying power of labor is considered today, it is important that we should do everything possible to keep wages at their present level. If we open our markets to European competition, we place our labor on the basis of European labor, and that course in our judgment would be most unwise. In view of the condition of industry, we regard it far more important to place orders with our own manufacturers—to stimulate employment and keep the wheels turning—than we do to give orders abroad, even for a temporary saving.

As a nationally known chemical engineer, commending the editorial to which Mr. Carroll refers, says:

"The State Highway Department, instead of a possible saving through the use of foreign cement, actually would be losing very much more to the taxpayers

of the State. Even though there are no cement plants in South Carolina, the circulation of the money required to purchase foreign cement, rather than domestic cement, would be felt to a major extent in South Carolina. Economic conditions do not recognize the geographical boundaries around South Carolina."

We deny the right of a state or government to buy abroad, even though it pay a higher price for a domestic article, because buying at home as a sustaining policy means prosperity, while the other means the reverse. Incidentally, the contract of South Carolina, we understand, has the provision that either domestic or foreign cement may be used and, with the passage of the tariff bill, recent reports indicate that some Southern cement mills have been given the contract for a great quantity of the cement to be used by the South Carolina State Highway Commission. This means that South Carolina will use domestic cement manufactured in Southern cement mills rather than imported cement. —Editor MANUFACTURERS RECORD.]

Essential That American Industries Be Given Preference Over Foreign Manufacturers

Concrete Steel Company
New York.

Editor Manufacturers Record:

I read your leading editorial in the June 12 issue with a great deal of interest and am very glad to see that the MANUFACTURERS RECORD has taken the stand it did against the purchase by State authorities of foreign cement. Your editorial brings out the main points and it is particularly pertinent at this time when American industries need what orders they can secure to keep our mills going and thus employ a large number of Americans at a living wage.

The probable saving referred to by the Highway Commissioners is very small compared with the wages which would be lost to the American laborer due to the loss of an order of this size. If we are to continue as a prosperous nation, we must keep labor well employed. A year ago, when American industry commenced to realize that orders were not coming in as fast as they should, there was a slowing up in industry and labor was laid off or reduced to short hours. Our much advertised prosperity wilted quickly and last winter we had a larger number of unemployed than usual. If our municipal, county and state authorities are going to buy their requirements from foreign countries, thus keeping foreign labor employed and increasing the unemployment in this country, our prosperity will disappear. American labor cannot compete with foreign labor and no one in this country should hope that they would, because we do not want to put America on the same economical level as Europe is today.

I believe that our large industries are endeavoring strenuously to maintain wages even in the face of reduced busi-

ness but, unless everyone helps to purchase American goods instead of European merchandise, we will be driven to reduce wages and this will automatically bring about further business depression.

It is too bad that some people are so short-sighted in their business policy and reach out for a small saving and in doing so injure the economic system of prosperity which has been built up in this country.

W. H. POUCH, President.

[At the time this is written we have received information indicating that orders for more than 1,000,000 barrels of cement are being placed by the South Carolina State Highway Department with Southern cement manufacturers. A Birmingham mill advises that they have an order for 500,000 barrels and an additional order has been given to Chattanooga interests, all of which is a subject for congratulations to South Carolina and also to Southern cement producers.

The MANUFACTURERS RECORD agrees thoroughly with the thought expressed by Mr. Pouch that American industry, in endeavoring to maintain wages in the face of reduced business, should receive every encouragement possible, so that such a policy may be kept up. Those of us who are thoughtful about the future recognize the importance of doing this, although it may mean a temporary loss to manufacturers and employers. The psychology of the business situation justifies it, even though economics may not.—Editor MANUFACTURERS RECORD.]

Southern Textile Mill Operatives "More Than Contented"

Athens Chamber of Commerce.
Athens, Ga.

Editor Manufacturers Record:

We wish to commend your article in the May 29 issue of the MANUFACTURERS RECORD on "What a Cotton Mill Did for One Tenant Farmer." There has been so much false propaganda circulated regarding living conditions and wages in Southern mills, that it is refreshing to read an article telling of conditions as they are today.

The writer was for several years connected with a large engineering firm in Atlanta, and this firm handled about 60 per cent of the textile expansion in Georgia and Alabama during this time. We have seen the conditions in the tenant farmer's home and the conditions offered in the Southern mill villages. The improved living conditions in the mill villages, furnishes the reason why our rural population has made such excellent textile operatives. They are more than contented with their improved conditions.

We assure you of our appreciation of your work for the South.

C. D. TERRELL, Secretary.

IRON, STEEL AND METAL MARKET

Approaching Summer Low in Production of Steel

Pittsburgh, June 30—[Special.]—Steel production is now tapering off slowly. Apparently nearly all the summer recession is now accomplished. Steel ingot production last week was at about 63 per cent, which compares with the February peak of 85 per cent. The recent recession in steel production was due largely to decreases in certain specific lines, of seasonal character, there being little or no change in the requirements of many consuming lines. There has been a sharp decrease in rail production. Annual orders are generally placed for delivery during the first half of the year. The Ensley, Ala., rail mill was scheduled several weeks ago for closing but at the last moment received an order which kept it going for a couple of weeks, and rail mills in the Chicago district got down to a 50 per cent rate a week or more ago. A secondary buying movement is predicted. Agricultural implement works have slowed down as usual for the between-seasons period. Automobile production in July will be very light, with a substantial increase in August.

Fabricated structural steel lettings since the first of the year have been quite steady and at a good rate, not much below that of last year. An unusual amount of new work has come up for bidding in the last few weeks. Freight car business, on the other hand, has almost disappeared and the shops have almost completed their old orders.

Producers of line pipe are fully booked for some time to come. Various estimates are made as to the distance ahead, the difficulty being that even producers themselves do not know just what quantity some new departments will be able to make day by day. One seamless tube mill at Gary, to make up to 24-inch, was completed early in the year, another at Lorain is running but is not yet up to the full size, while a third, at McKeesport, is coming along, and then there are electric welding departments at McKeesport and Youngstown scheduled to come in during July. The five do not represent a net addition to capacity, however, as many old fashioned lap weld furnaces have been abandoned and torn out to make room for the improvements. All told, line pipe manufacture in the remainder of the year may engage as much as 10 per cent of the total steel making capacity, which of course is quite a help when so many lines are rather dull. As to standard or ordinary pipe, it is in poor demand,

better of course in the second quarter of the year than in the first quarter, but well below a year ago.

One of the lightest general lines of consumption is dwelling house construction, this being observed alike by pipe, nail and sheet makers. There is a great distinction between this and construction work involving fabricated structural steel, the latter being largely in subway, bridge and viaduct work, although there is some building also. Thus an inquiry is up for bidding on 4000 tons of fabricated structural steel for an apartment hotel in Baltimore.

Finished steel prices have been steady in some lines and quite unsteady in others, there being on the whole little change in the last few weeks. Bars are quoted at 1.75c and shapes and plates at 1.70c as representative of the general market, but for a long time past these prices have been largely nominal, applying chiefly on carloads and other small lots. When it comes to a moderate sized or large lot there is always shading, but the shading is irregular if not erratic. Otherwise it is quite likely that long ago the Steel Corporation would have made an open reduction so as to stabilize the market. The \$2.15 price, Pittsburgh, on nails is being well held in this territory but in some sections there is shading of five or ten cents a keg. Galvanized sheets are perhaps a shade easier.

The scrap markets have continued dull, but little material is pressing on the market and prices seem to be in balance at their present low level. An upturn in scrap would presage an early increase in steel production as this market is usually barometric of such changes.

General Drift of the Metals Is Still Downward

New York, June 30—[Special.]—The metals have drifted with the tide of business, stock market declines, commodity deflation and general uncertainty. Lead and zinc have dipped to new lows. Tin has had an upward reaction, which however, has not inspired consumers to purchase, while copper barely holds steady.

Zinc is down to 4.15c per pound, East St. Louis, as against a bottom level of 4.12½c in 1921. The price of zinc ore has been reduced \$2 per ton to \$29, the lowest since 1922. Lead has been marked down \$5 per ton in two stages to 5.25c per pound, New York, and 5.15c, East St. Louis. Tin has been above 31 cents

per pound as against recent bottom levels of 29½c.

But the metals from a price standpoint are doing no worse than a host of other commodities, such as rubber, wheat, silk, sugar, hides, etc., which have been seeking new levels for the past several years. Declines in the stock market are frequently attributed to declines in commodities; and, vice versa, declines in commodities are often blamed on dropping shares on the stock exchanges. In other words a vicious circle seems to be in operation.

The steel industry continues brisk in only two departments: Steel pipe and fabricated structural steel, which are just as active in degree as other lines of demand are stagnant. Steel operations are down to about 64 per cent. The decline in automobile production during July promises to be sharp. Railroads are not purchasing raw materials to speak of. However, the good demand for structural steel is expected to carry along with it a fair demand for the non-ferrous metals.

It is a little too early to determine what will be the consumption of tin plate, hence tin, in the canning industry of 1930. Cannery of California peaches are striving to keep production down to 13,000,000 cases, though there is enough fruit to fill 19,000,000 cases. The pea crops for canning in Wisconsin and New York promise to be large. In view of the abundance of labor the crops of corn and tomatoes should be large, the hot weather being an aid to the corn crop.

Silver prices reached a new all-time low when sales were made at 33¾c per ounce. More silver mines are closing down because of unprofitable prices. The price of antimony has dipped to 7c per pound, duty paid, the lowest in several years. Quicksilver is one of the few metals which is holding firm at fairly high prices, being quoted still at \$120 per flask. Aluminum has been reduced one cent to 23.3c per pound, the first change since 1927. Nickel is the only metal to remain unchanged over the past several months.

Late the previous week export sales of copper were quite large, reaching 5,000 tons in one day. However, the past week the volume has shrunk sharply. Domestic business is also very light. The few sales are for shipment from July to October, the widest range of delivery in over a year. Purchasing into the fall may indicate that consumers expect that higher prices will be prevailing by that time.

It is recognized that over the near future copper prices are more apt to

decline than to advance. It is felt that custom smelters will soon again be in urgent need of orders and will be willing to cut prices to get the business.

The American Brass Co. has announced no changes in prices of its finished products since refined copper reached 12 cents. This company theoretically sells products therefore on a basis of 12½¢, but it is known that other brass makers have sold on a 12-cent basis. Sellers and buyers of copper scrap are having a hard time to get together on prices. Dealers accumulated present supplies at much higher prices and naturally hesitate to sell at levels being bid by consumers.

The wide fluctuations in tin prices prove puzzling to consumers. Advances are engineered by speculators on the rumors that principal mines are to be shut down completely for two months. As the week progressed more definite announcements were made concerning mine shut downs. Meanwhile the tin statistics become worse. Stocks of tin in official warehouses of the United States and Great Britain still gain.

It is expected that the low selling

prices of zinc will soon force many producers to shut down, a thing which is most needed by the industry. Demand has been stagnant, consumers doubtless awaiting some semblance of price stability.

The price reductions in lead were made to stimulate buying, but they had no such effect. Consumers continued to purchase in only a hand-to-mouth manner and in carload lots only. However, late in the week some of the wisest purchasers were beginning to contract as far ahead as August. The London price is steady at the equivalent of 5.79¢, New York, as against the quotation here of 5.25¢.

To Build 500 Steel Box Cars

Roanoke, Va.—The Norfolk & Western Railway Co. announces that it will build 500 all-steel box cars in its local shops, for which material will be assembled at once so that work may get under way the latter part of August. The cars will be of 50 tons capacity, of standard type with single door, and will be used in general merchandise service.

Whiting Research Achievements

Following the recent consolidation of the Goslin-Birmingham Manufacturing Company, Birmingham, manufacturer of machinery and especially sugar refining apparatus, and the Whiting Corporation, Harvey, Ill., foundry equipment, cranes, etc., the Goslin-Birmingham factor has entered into the research program begun by Whiting some time ago.

Devoted largely to problems pertaining to the transfer of heat evaporation, crystallization and the recovery of wastes, this research work has developed new and improved equipment which has saved various industries large amounts. New equipment and methods have been devised for the economic concentration of caustic soda solutions; economies are reported in the soap industry through the application of the forced circulation evaporator to glycerine recovery, and a forced circulation evaporator is about ready for commercial application.

A pulp washer for handling foamy liquors, such as are obtained in Southern kraft mills, and an apparatus for cooling or producing very cold water at low cost are other developments reported.

Among other specialties of the Whiting organization are a drop pit table equipment for railroad repair shops, for unwheeling locomotives; electrically operated cross-over bridges for freight yards; automatic garage equipment for automatically parking automobiles in multi-story garages; car washing machinery for railroad yards; a completely new design of electric traveling crane for foundries, and a dust collecting equipment for industrial plants.

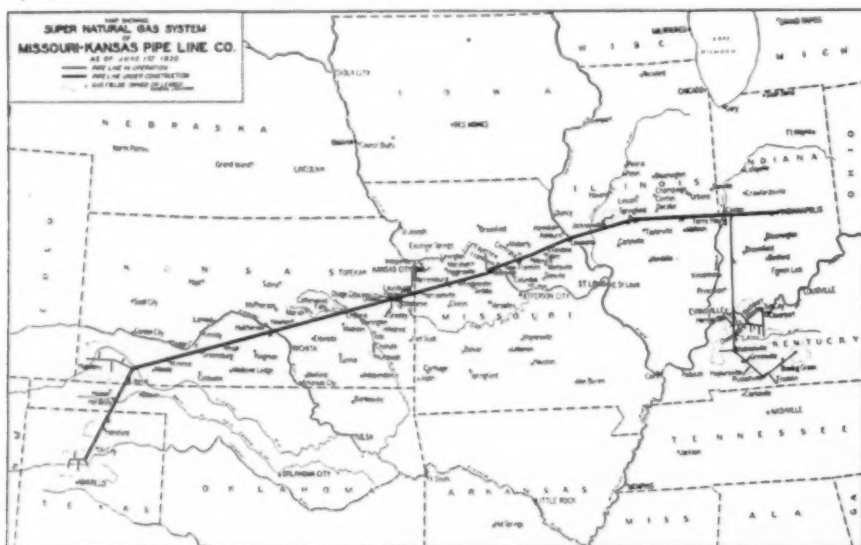
Steel for Power Station

Oklahoma City, Okla.—The Byllesby Engineering & Management Corp., Chicago, which is building the Belle Isle steam generating station here for the Oklahoma Gas & Electric Co., has awarded contract to the Mississippi Valley Structural Steel Co., St. Louis, for 600 tons of steel for the project, the Reno street 66,000-volt line and 93 tons for the Belle Isle outdoor structures.

\$500,000 For University Buildings

Knoxville, Tenn.—A bond issue of \$500,000, bearing an interest rate of 4½ per cent, has been sold by the State Funding Board, Nashville, to Kean, Taylor & Company, New York, and the Fourth and First National Company, Nashville, on a joint bid, at par, accrued interest and a premium of \$11,450. Funds from the bonds will be used to improve and erect new buildings here for the University of Tennessee.

Super Gas System to Embrace 2500 Miles of Pipelines



A \$40,000,000 pipe line under construction for the Missouri-Kansas Pipe Line Co., Chicago and Kansas City, will extend from the Texas Panhandle to eastern Indiana, a distance of 1250 miles. Contracts have been awarded to the Williams Contracting Co., Tulsa, Okla., for 525 miles; the Oklahoma Contracting Co., Dallas, Tex., for 308 miles, and to the Connor Construction Co., Kansas City, Mo., for 104 miles. Other contracts are expected to be awarded soon. The line will link all properties of the company into a single unit, embracing approximately 500,000 acres of gas lands, a large number of compressor stations and 2500 miles of pipe line. It will have a capacity of more than 175,000,000 cubic feet of natural gas daily. Brokaw, Dixon, Garner & McKee, Chicago, are the engineers.

AVIATION, AIRPORTS AND AIRWAYS

\$8,000,000 FOR AIRWAY IMPROVEMENTS

Bureau of Aeronautics Has Big Program for Next Fiscal Year

Washington, D. C.—For the fiscal year beginning June 30, the Bureau of Aeronautics of the Department of Commerce will expend nearly \$8,000,000 for improving the nation's airways. Outstanding projects included in this program are: Opening 900 miles of new air routes, lighting 3000 miles of airways for night flying, 33 additional radio beacons and 20 airway radio message stations, and maintaining the existing system of aids to flying. An important phase of the program covers the opening of a lighted transcontinental airway across the southern half of the United States, which will enable commercial planes to fly from New York to San Diego in two nights and one day. A lighted airway will be installed also between Dallas, Little Rock, Memphis, Nashville and Louisville, forming an alternate route to the southern transcontinental system, and an additional airway will be provided from the middle West to the East, by way of Indianapolis, Columbus, Pittsburgh, Harrisburg, Philadelphia, and New York. The Bureau also plans a lighted airway between Richmond, Va., and Jacksonville, Fla., to provide an alternate route for planes flying between Boston, New York and Florida, connecting at Miami with the Pan-American planes. Completion of the program will give the United States 17,500 miles of lighted airways and 65 airway radio stations broadcasting weather reports hourly. At the same time the government's teletype system for conveying weather data will have been extended to 8500 miles.

Important Air Lines Operate Out of Dallas

Dallas, Tex.—Passengers carried over the Southern Air Transport, Inc. system with general offices in Fort Worth, Tex., during April totaled 2522. More than 10,000 pounds of mail were carried on lines originating in Dallas, where the company has one of the country's most modern plants. The large administration building, hangar and shops, all fitted with the latest equipment, were built for the city by the company's airport division. At Dallas the company maintains a staff of 75 employees. Aircraft alone based at Love Field have a value in excess of \$300,000, and it is the

center of lines that cover Texas and reach northward and eastward to the large population centers.

Six lines are operated by the Southern Air Transport out of this city. Four are passenger lines that provide swift service, with connections, to Mexico City, to the Texas coast, to the important centers on the Pacific coast, and to the east. Two are mail routes that provide service between north and south Texas.

Bids on Buildings for Flying School

Schertz, Tex.—Bids will be opened July 15 by Capt. A. W. Parker, Constructing Quartermaster at Randolph Field, near Schertz, to erect the following buildings for the flying school: 85 officers' quarters to cost \$12,500 each; two bachelor officers' dormitories to cost \$150,000 each and a bachelor officers' mess hall to cost \$60,000; fire station to cost \$15,000, and a quartermaster maintenance building to cost \$20,000. John M. Marriott is the architect for the officers' quarters and Matthews & Keenan and Lilly & Drought, engineers, while Phelps & DeWees are architects for the dormitories and mess hall and the W. E. Simpson Co., engineers, all of San Antonio.

Two Companies to Begin Air Service

Charlotte, N. C.—Two passenger air lines will be put in operation in Charlotte within 60 days, according to plans announced by the Eastern Air Transport, Inc., and the Davis Air Lines, Inc. Fred P. Moreton, Atlanta, traffic representative of the Eastern Air Transport, Inc., states that his company will inaugurate passenger service on part of its present mail route and ultimately establish a full-time passenger line from New York to Miami, while L. J. Sauernborn, Birmingham, vice-president of the Davis Air Lines, Inc., announces that his company expects to extend its present Birmingham-Atlanta passenger line to Charlotte within a few weeks.

Baltimore Aircraft Company in Merger

Stockholders of the Berliner-Joyce Aircraft Corp., Baltimore, have ratified plans of the directors whereby the company will be acquired by the North American Aviation, Inc., a holding organization of Brooklyn, N. Y. Plans of consolidation call for the organization of a new company and the issuance of its stock to stockholders of the Berliner-Joyce Company share for share.

Modern Airport at Columbia, S. C.

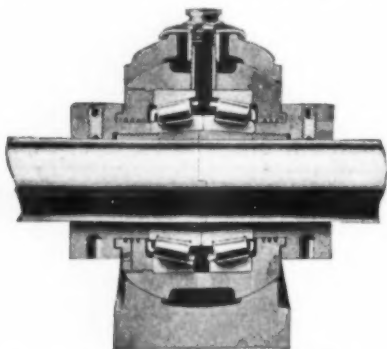


The airport recently completed at Columbia, S. C., comprises 140 acres of land owned by the city and is about three miles from the center of the business district. Access to the port is had by several routes over city streets. Tracks of the Atlantic Coast Line and Southern railroads, between Columbia and Charleston, lie along one edge of the field. There are four runways, 300 feet wide and from 2500 to 3300 feet long, with an average grade of two per cent. Natural and artificial drainage and the nature of the soil insure an all-weather landing area. There is a modern brick and steel hangar, 100 by 120 feet, with offices, shops, lounge rooms and other conveniences. General contractor was W. A. Crary & Son, Columbia. The Virginia Bridge & Iron Co., Roanoke, furnished the steel work. H. H. Robertson Co., Pittsburgh, Pa., furnished the roofing material. Engineering work was handled by Stone & Webster Engineering Corp., New York. E. R. Southree is manager of the Curtiss-Wright Flying Service unit at Columbia.

NEW AND IMPROVED EQUIPMENT

Ball and Socket Pillow Block

Designed several years ago and tested in practically every type of service, a new Timken anti-friction ball and socket pillow block has been announced by the Link-Belt Company, Chicago. This unit is intended to fit any good grade of commercial shafting, from

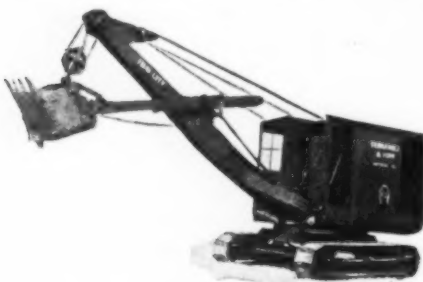


Cross Section of Link-Belt Timken Pillow Block.

17/16 inches in diameter to the largest size, without special fittings or the use of appliances. It is practically dust-proof because of pressure lubrication, the grease being forced in at the center and out at the shaft openings. Thus, with the addition of the grease seal at the top, dust and grit are kept out of the bearing and grease is kept in. The pillow block is kept in stock at points throughout the country.

Full-Revolving Power Shovel

Announcing a new Bay City K-2 full-revolving, half-yard convertible power shovel as a companion to the model K light, half yard, full revolving convertible shovel, Bay City Shovels, Inc., Bay City, Mich., state that both models will



Bay City Shovel, Convertible.

be continued in full production. The principal difference between the machines is the cubical contents of the bucket, length of shovel boom and complete working weight. Model K-2 has a working weight of 18 tons as a shovel

and is equipped with half-yard struck measure bucket with manganese front and reversible teeth, and an 18-foot shovel boom with 12.5 feet dipper sticks, chain type crowd. Crawler treads are 16 inches wide and the over-all width of the machine is 8.4 feet, as compared with 8 feet for model K, while the over-all length is 9 inches greater than that of model K. Features common to both models are an 8-inch center pin, 71-inch diameter swing roller path, unit cast car body, unit cast machinery frame, frictionless ball or roller bearings. In addition to shovel attachment, model K-2 is available with clamshell, dragline, skimmer, trench hoe and crane attachments.

Williams Clamshell Bucket

Numerous improvements have been made on the Williams "Champion" clamshell bucket, from the narrow head down to the digging lip, the unit having been made more rugged, with added strength to back up its greater digging power and speed. Combining the use of cast steel and rolled steel parts, the head construction has been given greater ri-

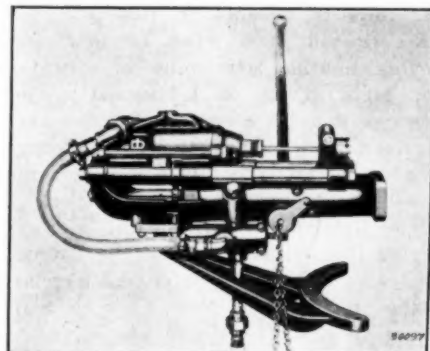


Designed for Unusual Power in Digging

gidity and strength to take twisting strains of hard digging, and added digging leverage has been provided by cast steel brackets extending well beyond the backs of the scoops. A new scoop, all-welded and smooth on the inside, has been provided for easy filling, while a one-piece, full-width main hinge keeps the scoops in alignment. There is said to be practically no wear on the hinge pin, even after years of hard service. The bucket is manufactured by the G. H. Williams Company, Erie, Pa.

Shank and Bit Punch

The Ingersoll-Rand Company, New York, announces a new shank and bit punch known as the 34SP punch, designed to fit the No. 34 drill steel sharpener. The feed cylinder, valve chest oiler, and guide holder are constructed in one piece and the valve chest is bushed. The short throw and easy reach of the operating lever greatly speed op-



Ingersoll-Rand Punch, 34SP

erations, while complete lubrication is maintained from one oil chamber. Stuck pins are eliminated by positive driving action. Combination shank and bit guides permit handling both bits and shanks on any one steel section without changing guides and assure correct alignment of steel to be punched. With a 34SP punch attached to the No. 34 sharpener, the complete outfit will handle any section of drill steel up to 1 1/2 inches in diameter, and will make bits up to 2 1/2 inches in diameter.

High Speed Motor Trucks

Designated as models 63 and 64, two new 6-cylinder high speed motor trucks designed for medium and heavy duty hauling, have been announced by the White Company, Cleveland, Ohio. Both models are equipped with overhead type valve engines with seven-bearing crankshafts, electrically synchronized dual ignition system, four-wheel service brakes and four-speed transmission. Model 64 has a 100-horsepower engine, with a piston displacement of 519 cubic inches, while the engine in model 63 has a piston displacement of 396 cubic inches. The rear axle of model 63 is the new White single reduction full floating type and that of model 64 is of the dual reduction full floating type. Model 63 is available in a 168-inch standard wheel base, with 157 and 188 inches optional, and model 64 in a standard wheel base of 180 inches, with 157 inches, 195 inches and 215 inches optional.

CONSTRUCTION DEPARTMENT and NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

Airports, Airplane Plants, Etc.

Ky., Lexington—Blue Grass Flying Service incorporated; Harkness Edwards, Russell Cave Pike.

Ky., Lexington—Robert Dixon, Frankfort, H. R. Finnell, Richmond, Ky., and associates, reported, interested in formation of air line by combination of Mason-Dixon Air Lines, Inc., and All Metal Aircraft Co., both Cincinnati, O.; establish air line linking Detroit and Atlanta, Ga., through Lexington and Cincinnati.

La., Baton Rouge—Police Jury of East Baton Rouge Parish called for new bids July 21 on revised plans and specifications for furnishing all material and labor for constructing administration building and hangar on East Baton Rouge Airport Field; also receive bids at same time for wiring, plumbing and heating on both buildings; Jones, Roessle & Olshner & Wiener, Architects, Maison Blanche Bldg., New Orleans, and Raymond Bldg., Baton Rouge.

La., New Orleans—Wedell-Williams Air Service, Inc., Whitney Bldg., started work on construction of hangar, capacity 15 airplanes; 100x100 ft.; cost \$20,000. 4-3

La., Shreveport—City Council, L. E. Thomas, Mayor, rejected all bids for work at municipal airport; instructed Southern Air Transport Co., Fort Worth National Bank Bldg., Fort Worth, Tex., and Jones Roessle, Olshner & Wiener, Architects, Ardis Bldg., to draw revised plans for administration building to cost about \$40,000; hangar, \$20,000; electrical fixtures, \$14,000, and conc. work, \$4500; under revised plans fence will be eliminated; W. T. Mayor, Commr. of Public Utilities; call other bids July 21 on individual items and group project.

Md., Baltimore—Stockholders of Berliner-Joyce Aircraft Corp., W. W. Moss, Pres., Dundalk, ratified proposal of North American Aviation, Inc., C. M. Keys, Pres., 40 Flatbush Ave. Extension, Brooklyn, New York, to acquire company; North American Aviation, Inc., plans organizing subsidiary to operate. 6-19

Miss., Meridian—Wright Construction Co., 3001 Fifth Ave., low bidder for grading airport site. 6-12

Tenn., Nashville—See Electric Light and Power

Texas—Dept. of Commerce, Aeronautics Branch, Washington, D. C., will let contract after July 1 for construction of landing fields and installing equipment on airway between El Paso and Fort Worth, 590 miles; landing field will be installed every 30 miles and revolving beacons every 15 miles, radio beacons at Wink, Sweetwater and El Paso. 5-1

Texas, Goose Creek—Haywood Nelms, Houston Airport, Houston, reported, interested in building of airport.

Va., Danville—City will establish and lease airport now being leased to Dixie Flying Service. 4-17

Bridges, Culverts and Viaducts

Proposed Construction

Ark., Lake City—Senate passed House bill authorizing State of Arkansas to construct free highway bridge across St. Francis River at Lake City. 10-31-1929

Ark., Little Rock—City Council considering viaduct at Sixth and Bond St.

Arkansas—War Dept., Washington, approved plans State Highway Comsn., Little Rock, for reconstruction bridge across Sulphur River about 1/2 mi. from Texas & Pacific R. R. Bridge, Miller County.

Ky., Lexington—City, White Guyn, City Engr.; Cincinnati, New Orleans and Texas & Pacific R. R., B. Herman, Ch., Engr. Washington, received low bid from J. U. Schichli & Brothers, 1300 W. Oak St., Louisville, at \$96,075, for proposed rein. conc. viaduct on West High St. 6-12

Louisiana—Louisiana Highway Comsn., Baton Rouge, cancelled request for bids to be opened July 1 for 250-ft. Saline Bayou Bridge on Luella-Kadesh Highway, Route 1, Natchitoches and Winn Parishes; H. B. Henderlite, State Highway Engr. 6-19

La., New Orleans—City Sewerage and Water Bd., and Jefferson Parish Police Jury, will start, at once, to build conc. bridge over Seventeenth St. canal, at Orleans-Jefferson Parish intersection with Metairie road.

Maryland—State Roads Comsn. received low bids for 3 bridges. See Roads, Streets, Paving.

Miss., Columbia—Lowndes County Bd. of Supvrs., John J. Richards, Clk., receives bids July 10 for 11 culverts and bridges: Conc. culverts, McPherson road, Dist. No. 3; conc. culvert, Pratt Lake Highway No. 45, Dist. No. 1; conc. culvert, Will Evans Place, Dist. No. 5; extension to conc. culvert, Robinson road, Dist. No. 5; conc. culvert, Robinson road Dist. No. 5; 75-ft. pile bridge, White Slough Highway No. 45, Dist. No. 5; 60-ft. pile or timber bridge, Robinson road, Dist. No. 5; conc. wing, McGowers Creek, Highway No. 45, Dist. No. 5; wood bridge, Lindsey Ferry road, Dist. No. 4.

Miss., Natchez—Adams County Bd. of Supvrs. receives bids July 8 for reconstruction and 2 additions to bridge over St. Catherine Bayou on Lower Natchez-Woodville road: Two conc. piers skewed 45 degrees, one conc. abutment to support 150-ft. steel truss span and 51-ft. I-beam span, also skewed 4 degrees; conc. slab deck, 20-ft. roadway, short skewed I-beam span, timber flooring at connection to existing span; remove north steel cylinder pier; 44,000 lb. rein. steel; 35,000 lb. struct steel.

Miss., Sardis—Panola County Bd. of Supvrs. receives bids July 7 for steel bridge and trestle approach across Fowler Creek on Crenshaw to Sledge Highway.

South Carolina—State Highway Coman., received low bids for 14 bridges. See Roads, Streets, Paving.

Tennessee—Dept. of Highways and Public Works, receives bids for 6 bridges. See Roads, Streets, Paving.

Tennessee—War Dept., Washington, approved plans Dept. of Highways and Public Works, Nashville, for bridge across Cumberland River near Fort Blount Ferry.

Tenn., Hartsville—War Dept., Washington, approved revised plans Dept. of Highways and Public Works, Nashville, for bridge across Cumberland River at Harts Ferry; revised plans provide substitution of timber bents for two 120-ft. steel spans of southern

approach to main structure, originally proposed, and change in spacing trestle bents used for approaches, from 43 to 25 ft. 12-12-1929

Tex., Point Isabel—Point Isabel Bridge Co., H. H. Poshing, Pres., receives bids soon for 10,500 ft. heavy timber on piling causeway, with 3 draw bridges, 100-ft. and 50-ft. single spans, from Point Isabel to Padre Island, cost \$1,000,000. 4-17

Texas—State Highway Comsn., Austin, authorized construction of free bridge across Red River, between Hardeman County, Tex., and Jackson County, Okla., cost about \$70,000; G. C. Wickline, State Bridge Engr.

Texas—See Roads, Streets, Paving.

Tex., Houston—City, Walter E. Montleth, Mayor, plans Alameda Road bridge across Brays Bayou, estimated cost \$40,000; J. M. Nagle, City Engr., preparing plans.

Virginia—See Roads, Streets, Paving.

Virginia—State Highway Comsn. receives bids for 3 bridges. See Roads, Streets, Paving.

Va., Norfolk—City Council, I. Walke Truxtun, Mgr., appropriated \$20,000 to repair Campostella Bridge, including re-decking, etc. 5-8

West Virginia—State Road Comsn. receives bids for 4 bridges. See Roads, Streets, Paving.

Contracts Awarded

Georgia—State Highway Bd. let contracts for 3 bridges. See Roads, Streets, Paving.

Mo., Kansas City—See Roads, Streets, Paving.

Tennessee—See Roads, Streets, Paving.

Texas—State Highway Comsn. let contracts for 3 bridges. See Roads, Streets, Paving.

Tex., Beaumont—Coastal Construction Co., Orange, contractors, will start July 7 constructing Taylor's Bayou Bridge on Port Arthur Sabine road, Jefferson County; replace present span; cost \$22,000. 3-6

Tex., Presidio—Atchison, Topeka & Santa Fe Ry. Co., G. W. Harris, Ch. Engr. of System, Chicago, let contract to List Construction Co., 415 Railway Exchange Bldg., Kansas City, Mo., for 1900 ft. untreated material, open deck bridge across Rio Grande River, at Presidio, center height about 30 ft.; 40-ft. girder on pile piers in middle of bridge, for passage of small boats; connects Orient Lines of U. S. and Mexico.

Va., Petersburg—Seaboard Air Line Ry., W. D. Faucette, Ch. Engr., Savannah, Ga., let contract to Cornell-Young Co., Georgia Casualty Bldg., Macon, Ga., for conc. work and foundation, and to American Bridge Co., 30 Church St., New York, for steel work, on \$750,000 bridge across Appomattox River, Petersburg. 5-1

W. Va., Deepwater—Virginia Ry. Co., C. H. Dix, Pres., A. M. Traugott, Ch. Engr., Norfolk, Va., reported, let contract to American Bridge Co., 30 Church St., New York, for 205 tons struct. steel. 6-19

Canning and Packing Plants

La., Slidell—White Kitchen Canning Co., Inc., chartered; Gus A. Fritchie.

Miss. Hazlehurst — A. Glornoso, Crystal Springs, establish tomato paste plant.

Tex., Harlingen — B. F. Hardin, and associates erect citrus canning plant.

Coal Mines and Coke Ovens

W. Va., Booth — E. L. & W. Coal Co., W. A. Lawler, Pres., Jacobs Bldg., Fairmont, advises repairs on burned coal tippie will be complete and in operation in next 10 days; Grub & Henry, Contrs.

Cotton Compresses and Gins

Ark., Forrest City — Farmers Gin Co., capital \$30,000, incorporated; J. E. Ferguson.

Tex., Dallas — Farmers and Merchants Compress and Warehouse Co., incorporated; Wm. F. Neale, 3840 Shenandoah St.

Cottonseed-Oil Mills

Ark., Pine Bluff — Planters Cotton Oil Co., 1021 E. Fifth St., constructing conc. and steel warehouse, 75x175 ft.; cost \$30,000; E. C. Royse Construction Co., National Bldg., laying conc. foundation.

Drainage, Dredging and Irrigation

Florida — Federal Court, authorized C. L. Davidson, received for Melbourne-Tilman Drainage District, Brevard County, to divert \$50,000 from sinking fund to carry improvement in district; work includes completion of major outlet canal, construction of spillway dam and settling basins.

La., Bossier City — Bd. of Commrs. Gravity Drainage Dist. Parish of Bossier City, reported, rejected bids for construction of remaining ditches to be dug in Gravity Sub-Drainage Dist. No. 10; will call for new bids; information, etc., on application to E. B. Herndon, Jr., Asst. Sec., 340 First Natl. Bank Bldg., Shreveport. 6-19

Miss., Blue Mountain — New West Hatchie and Owl Creek Drainage Dist. formally approved by Bd. of Supervisors of Tippah County; will be organized in few days; will reclaim 1717 acres land in eastern portion of county, Dists. 4, 2 and 3; funds to be supplied from special bond issue of \$10,000.

Miss., Marks — Commrs. Little Opossum Bayou Drainage Dist. receive bids July 10 for drainage work including 11 miles of cleanout and enlargement of old canals. See Want Section — Bids Asked.

Tenn., Memphis — U. S. Engineer Office, McCall Bldg., received following low bids per cubic yard for earthwork in St. Francis and Upper Yazoo Levee districts, designated below by piece number, yardage, name of bidder and price bid: Lower St. Francis Dist. — No. 21, 647,000, McWilliams Dredging Co., New Orleans, La., \$1.775; No. 22-A, 306,000 H. B. Blanks, Tallulah, La., \$.24; No. 22-B, 505,000, Lowrance Brothers Co., Driver, Ark., \$.229; Piece No. 25-A, 375,000, Lowrance Brothers Co., \$.253; Piece No. 25-B, 375,000, McWilliams Dredging Co., \$.253; No. 26-A, 900,000, Lowrance Brothers Co., \$.23; No. 26-B, 900,000, Lowrance Brothers Co., \$.238; Upper Yazoo Dist. — No. 29-A, 355,000, Delta Construction Co., and R. T. Clark Co., Inc., Fayette, Miss., \$.247; No. 29-B, 550,000, W. G. Somerville, Jr. & Co., Memphis, Tenn., \$.264; No. 29-C, 450,000, A. Guthrie & Co., \$.27; No. 29-D, 510,000, J. J. McCaughey & States Construction Co., Chicago, Ill., \$.25; Nos. 29-A, 29-B, 29-C, 29-D, H. E. Culbertson Co., Cleveland, Ohio, blanket bid, \$.2434; Lowrance Brothers Co. recommended for Piece No. 21 at \$.194; for No. 22-A at \$.354; No. 22-B at \$.229; No. 25-A, \$.253; No. 25-B, \$.263; No. 26-A, \$.23; No. 26-B, \$.238; Delta Construction Co. and R. T. Clark Co., Inc., Fayette, Miss., recommended for No. 29-A at \$.247; No. 29-B, \$.2782; No. 29-C, \$.322; No. 29-D, \$.228. 5-29

Texas — State Water Bd., Austin, granted permission to Owen M. Combe, Brownsville, to investigate feasibility of water diversion from Rio Grande into Northern County and south Willacy County for irrigation project involving 150,000 acres.

Tex., Edinburg — Hidalgo County Water Improvement Dist. No. 6, A. L. Cramer, Pres., advises all bids received June 3 on canal lining were rejected; on July 12 will receive bids on 221,500 sq. ft. of canal lining; A. Tamm, Engr., Harlingen. 6-19

Va., Richmond — Richmond Port Comsn. and Council Comm. on Dock, River and Harbor will request City to provide funds for preliminary work in connection with \$4,500,000 Government improvement program for James River, remove cofferdam in upper harbor; establish adequate terminal below city and acquire land for purpose of straight-

tening river between Richmond and City Point; city eventually expend about \$2,000,000 for project; R. Keith Compton, Director of Public Works, Richmond; Col. Henry M. Jewett, U. S. District Engr., Norfolk. 1-9

Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

Ga., Columbus — Consolidation of Columbus Electric and Power Co., and Georgia Power Co., Atlanta, reported effective with granting of charter to consolidated company; operation of all properties will continue under name of Georgia Power Co.; merger provides for exchange of Georgia Power Co.'s stock for outstanding stock of Columbus Electric and Power Co. 5-29

La., Natchitoches — See Water Works.

Miss., Prentiss — Town plans installing new equipment at light plant.

Mo., Bagnell — Stone & Webster Engineering Corp., 49 Federal St., Boston, Mass., advises following contracts let during May on Osage Power Plant near Bagnell for Union Electric Light & Power Co., 12th and Locust Sts., St. Louis; excavation about 75% finished, about 25% of conc. for dam and spillway has been poured; Contract for sand let to Missouri River Sand & Gravel Co., Booneville and Standard Building Materials Co., 722 Chestnut St., St. Louis; tainter water gates, Mississippi Valley Structural Steel Co., St. Louis; locomotive crane, American Hoist & Derrick Co., St. Paul, Minn.; 2 gantry cranes, Whiting Corp., 136 Liberty St., New York; struc. steel for highway on dam and operating bridge on spillway, Stupp Bros. Bridge & Iron Co., 8326 Ave. G., St. Louis. 6-19

Mo., St. Louis — G. L. Tarlton Co., 411 N. Seventh St., reported, has contract for installing street lights.

N. C., Rutherfordton — Southern Public Utilities Co., 432 S. Church St., Charlotte, reported, acquired water and light plant; subject to ratification by people; also submitted bid to Spindale and Forest City for water and light plants. 5-29

Okla., Oklahoma City — J. Holland, 2750 W. Twentieth St., reported, has preliminary plans for ornamental lighting system Western League Baseball Park; cost \$25,000.

Okla., Oklahoma City — Byllesby Engineering and Management Corp., 231 S. LaSalle St., Chicago, Ill., let contract to Mississippi Valley Structural Steel Co., 3117 Big Bend Rd., St. Louis, Mo., for 600 tons steel for Bell Isle, Reno St., 66 kv. line and 93 tons for Bell Isle outdoor structures for Oklahoma Gas & Electric Co. 12-12

Tenn., Knoxville — State Railroad and Public Utilities Comsn., Nashville, authorized Knoxville Power and Light Co. to build transmission and distribution lines in Union County.

Tenn., Nashville — City, reported, defeated electric light, airport and memorial plaza bonds. 5-6

Tex., Anahuac — Gulf States Utilities Co., 362 Liberty St., Beaumont, construct by company's forces, 10 miles of 13 kv. line to Hankamer and Anahuac; material contracts covered by Stone & Webster, Engineering Corp., Boston, Mass. 6-19

Tex., San Antonio — San Antonio Public Service Co. has permit for \$55,000 addition to power plant, Concepcion Rd.; house addition boilers and high pressure turbine of 10,000 watts capacity.

Virginia — East Coast Utilities Co., Richmond, operating through subsidiaries group of electric light and power, telephone and ice properties in Virginia, North Carolina and Delaware, plans issuing \$900,000 convertible secured goldnotes, due July 1, 1932. 10-31

Va., Front Royal — West Penn Electric Co., 14 Wood St., Pittsburgh, Pa., reported, acquired Warren Power Co., owning dam and power house on Shenandoah River 2 miles below Riverton.

Va., Martinsville — City receives bids Aug. 8 for telephone and electric light franchise.

Va., Mouth of Wilson — Trousdale Electric Co., incorporated; Mrs. Josie J. Field; build and operate dam on Fox Creek in Grayson County for power purposes.

Va., Norfolk — Virginia Electric & Power Co., Richmond, reported, build and operate high voltage power line by way of West Norfolk to Pig Point at Nansemond army depot; line will extend via submarine cables under Western Branch paralleling West Norfolk drawbridge, along Norfolk-Churchland Rd., etc.; line will be of 11,000 volt capacity; rights of way obtained.

Va., Norfolk — Engineers of Virginia Electric & Power Co., Richmond, reported, completed data for white way on High St. and plan for substituting electric power for steam at Suffolk pumping plant of Portsmouth water works system. 5-8

Va., Richmond — Virginia Electric & Power Co. has plans by Carneal, Johnston & Wright, Electric Bldg., for \$150,000 distribution and storage building, Stafford St. and Grayland Ave.; open bids for construction July 10; 3 stories and basement; rein. conc. main building will be 100 ft. sq. with garage wing, 80x250 ft.

W. Va., Boncar — McClintic-Marshall Co., Oliver Bldg., Pittsburgh, Pa., reported, has contract for 1080 tons fab. struc. steel for buildings and bridge for Electro Metallurgical Development Co. of America, subsidiary of Union Carbide & Carbon Co., Carbide Carbon Bldg., New York. 6-19

Fertilizer Plants

Tex., Houston — Engineering Service Corp., Const. Engrs., Post Dispatch Bldg., Houston, completed dredging work on Davison Chemical Co.'s project south side of channel below Pasadena; property raised with dredging spoil and at present time approximately 7000 ft. of railroad is being constructed to newly acquired 15-acre tract; also under construction, 70 ft. shell highway connecting this property to one of county highways; railroad connection will be to the Navigation District's railroad on south side of channel; all building plans and other miscellaneous construction designing and plans are being handled by Engineering Dept. of Davison Chemical Co., Baltimore Trust Bldg., Baltimore, Md. 6-1

Flour, Feed and Meal Mills

Ark., Little Rock — Globe Grain & Milling Co., Los Angeles, Cal., advises all machinery, equipment, etc., has been purchased and is being installed in branch plant at Little Rock; will operate as phosphating plant only and not a blending plant. 6-19

Garages and Filling Stations

Ala., Guntersville — Marshall County Oil Co., capital \$30,000, incorporated; E. H. Couch, J. B. Waldrop.

Ala., Montgomery — Dave Fleming, reported, erect filling station, 208 Wilkinson St.

Ala., Mobile — Pate Co., Mobile, has contract for service plans Firestone & Rubber Co., Akron, O., St. Louis and Joachim Sts.; 165x100 ft.; mottled brick; stone trim. 6-26

Ark., Pine Bluff — Firestone Service Stores, Inc., H. O. Hinton, Pres., 13th & Chestnut Aves., plans erecting service station S. E. Cor. Fifth Ave. and State St.; 70x152 ft.; fireproof; cost \$60,000.

Fla., Monticello — Pan-American Petroleum Corp. purchase Roberts Bldg., Courthouse Sq.; erect filling station.

Fla., Orlando — Orlando Tire Co. incorporated; Jesse Rice, 52 W. Central Ave.

Fla., Vero Beach — Standard Oil Co., James Knight, District Representative, started work on building, 50x31 ft., corner Osceola Blvd. and F. E. O. R. R.; 1-story, steel frame, sheet metal siding, cement floor.

Ga., Atlanta — Dobbs Tire Co., 222 Spring St., receiving bids on number of service stations, W. Peachtree St., Lakewood Heights, Gordon St., S. W. and Buckhead; conc. areas and footings; brick and walls; comp. roofing; bidders estimating are: A. K. Adams Co., 542 Plum St., N. W.; C. H. Van Ormer, Piedmont Ave., N. E.

Ga., Atlanta — Standard Oil Co. of Kentucky, 746 Marietta St., N. W., has plans by company's engineering dept. for garage in rear of present building, cost \$125,000; 2 stories and basement; rein. conc.; brick walls; steel sash and doors; built-up roof.

Ga., Atlanta — Wofford Oil Co., 140 Spring St., plans service station Spring & Fourth Sts., N. W.; cost \$12,000; owner builds.

Ky., Hazard — Bryant's Garage, Inc., capital \$35,000, chartered; John A. Bryant, E. Lineback.

Ky., Louisville—Goodrich Silvertown, Inc., First St. and Broadway, reported, has site Bardstown Rd. and Stevens Ave., for service station.

La., New Orleans—Ford Motor Co., Detroit, Mich., reported, plans expending \$500,000 in New Orleans for plant expansion.

Md., Baltimore—Consolidated Engineering Co., Inc., St. Paul and Franklin Sts., Gen. Contrs. for warehouse and service station at Oak St. between 20th and 21st Sts. for Firestone Tire & Rubber Co., 714 E. Pratt St., and Akron, O., let following sub-contracts: Structural steel, Dietrich Bros., 220 Pleasant St.; rein. steel and steel sash, Maryland Steel Products Co., Standard Oil Bldg.; electric work, Bonnett Electrical Contracting Co., 210 N. Calvert St.; plumbing and heating, D. W. Chapman, Builders Exchange; glass and glazing, Pittsburgh Plate Glass Co., 8 S. Paca St.; millwork, Wurzbarger Co., Annapolis Ave. and Western Maryland R. R.; cast stone and Kalamein doors, Consolidated Supply Co., 1102 N. Charles St. 6-5

Md., Baltimore—Fourth Asst. Postmaster General, Washington, receives bids to July 17 for furnishing garage quarters for post-office purposes here, at stated rental per annum and such construction as designated in specifications issued June 25; site selected by department at 439 to 457 E. Preston St. and extending through to Biddle St.; all necessary data will be furnished by P. O. Inspector, Wrightson Chambers, Room 306, Temporary Main P. O., Lombard and Commerce Sts., Baltimore.

Miss., McComb—Texas Co., Harry P. Nall, Local Mgr., has completed plans for service station Broadway and Canal St. 6-3

Mo., Kansas City—George Converse Motor Co., incorporated; George K. Converse, 3432 E. 69th Terrace.

Mo., Owensville—Tate & Sons, Inc., chartered; Joseph T. Tate.

Mo., St. Louis—Lawler & Balthasar Automobile Repairing and Painting Co., Inc., chartered; Herbert C. Lawler, 4837 Margaretta St.

Mo., St. Louis—Peerless Mo Co., 4215 Clayton Rd., reported, let contract to W. C. Harting Const. Co., St. Louis, for office and warehouse, 5121 Flyer Ave.; Mack Electric Co., 4581 Gravois St., for wiring; Braun Plumbing & Heating Co., 3315 Meramec St., for heating.

N. C., Charlotte—Olds Motor Works, Lansing, Mich., reported, acquired Carolina Oldsmobile Co.; will operate; George D. Daly, Local Mgr.

N. C., Durham—Piedmont Austin Co., capital \$50,000, incorporated; C. N. Harris, Chapel Hill Rd.

N. C., Mebane—T. A. Williams, Randleman, and J. R. Roddins, Columbia, reported, acquired Mebane Chevrolet Co.; will operate as R. & W. Chevrolet Co.

N. C., Sanford—Bobby Burns, Inc., capital \$50,000, chartered; R. L. Burns, Graham S. Field.

N. C., Thomasville—Home Motor Co., capital \$100,000, incorporated; E. P. Wharton, David White.

N. C., Wilmington—Wenberg Brothers, Inc., capital \$50,000, incorporated; J. E. Wenberg, 406 S. 17th St.

Okla., Oklahoma City—Oklahoma Gas & Electric Co. will erect 2-story service building south of present garage at Noble and Broadway; 139x112 ft.; build spur track; install overhead cranes and other equipment, including ovens, oil tanks, high tension testing equipment, etc.; will house repair shop, laboratories, office for reclamation dept. and offices for dispatchers; construction to begin at once under direction of F. S. Partidge, Gen. Supt. of Construction; complete Dec. 1.

Texas—Texas & Pacific Coal & Oil Co., Ft. Worth Natl. Bank Bldg., Fort Worth, acquired following bulk stations from Central Texas Refining Co.: Athens, Austin, Bartlett, Blooming Grove, Cameron, Cooledge, Corsicana, Dawson, Frost, Gatesville, Gonzales, Goresbeck, Hearne, Houston, Kaufman, Kemp, Karens, Lockhart, Lott, Luling, Mabank, Marlin, Palestine, Rickdale, Streetman, Taylor, Teague, Temple, Uvalde, Waco and Wortham; no improvements or additions contemplated at this time. 6-19

Tex., Aspermont—Joyce Motor Co., incorporated; C. E. Joyce, M. E. Crossley.

Tex., Yoakum—L. W. Sheekles, reported, construct filling station Lott and Hopkins Sts.

Va., Dinwiddie—Lewis Chevrolet Corp., incorporated; E. M. Lewis, M. W. Booth.

Va., Fredericksburg—Perry and Baggett, Inc., capital \$25,000, incorporated; S. A. Baggett.

W. Va., Bluefield—Gulf Refining Co., Frick Annex, Pittsburgh, Pa., plans erecting filling station, Mercer St. and Bluefield Ave.; cost \$10,000.

Gas and Oil Enterprises

Ala., Evergreen—City, reported, granted gas franchise to Alabama Natural Gas Co., Birmingham.

Ark., Pine Bluff—Barnsdall Refining Co., 1310 N. Peoria St., Tulsa, Okla., erect bulk plants and chain of service stations at junction of Missouri Pacific and Cotton Belt Railroads; 230x160 ft.; storage capacity 48,000 gal.; Birmingham Pump and Tank Co., will erect plant; A. M. Hart, State Supervisor Service Stations in charge of plant.

Arkansas—Macmillan Petroleum Corp., El Dorado, advises constructing refinery near here; following contracts for equipment let: two 310 h. p. Heine cross drum box header, 160 lb. pressure, from Continental Supply Co., St. Louis, Mo.; 150,000 fire brick, A. P. Green Fire Brick Co., Mexico, Mo.; 40 tons Sairset cement, A. P. Green Fire Brick Co.; 60 tons struc. steel, Mississippi Valley Structural Steel Co., St. Louis; 11 tons castings, El Dorado Foundry & Machine Co., El Dorado; 23 centrifugal pumps, Byron Jackson Pump Co., Battle Creek, Mich.; 18 ft. wide x115 ft long x 44 ft. high fluor cooling tower, National Supply Co., Los Angeles, Cal.; 5000 sq. ft. condensers and exchangers, Griscom-Russell Co., New York City; 4000 sq. ft. condensers and exchangers, Southwestern Engineering Corp., Los Angeles, Cal.; welded pipe fittings, Tube-Turns, Inc., Louisville, Ky.; fabricated pipe, Vanstone nipples, forged steel hub and flanges, Midwest Piping and Supply Co., St. Louis, Mo.; 34 tanks, screwed and flanged fittings Crane Co., bought through National Supply Co., Los Angeles, Cal.; 20,000 ft. 3/4-in. Toncan iron seamless tubing, Babcock & Wilcox Co., 85 Liberty St., New York; 20,000 ft. 3/4-in. steel fusion welded tubes, Republic Steel Corp., Youngstown, O.; all tubular goods specified fusion welded if possible, second choice, seamless end lap welded, Republic Steel Corp.; cone work, Peters and Cramer, El Dorado; brick work, Rau Contracting Co., Kansas City, Mo.; plant expected to be complete last of August. 6-19

La., Slidell—L. J. Folsa, representing Robt. S. Phifer and others, submitted tentative gas franchise.

Kentucky—Moody-Seagraves, Esperson Bldg., Houston, reported, making surveys of 5 tentative routes for 24-in. pipe line from central-eastern Kentucky gas fields through Ohio to Detroit; construction of line and compressor stations will cost \$20,000,000; work to begin within present year; surveys Portsmouth and extending up Scioto River provide for line crossing Ohio River through Columbus and Toledo to Detroit; supply of gas for line will be secured from operating companies in Kentucky, including Inland Gas Co., Ashland, owning and operating gas lands in Floyd, Knott and adjacent counties. 5-29

Kentucky—Gulf Refining Co., Frick Annex, Pittsburgh, Pa., through Union Gulf Corp., plans considerable expansion and distributing facilities down Ohio River including water terminal, storage facilities & wholesale distributing station at Louisville, Ky., Charleston and Huntington, W. Va., and possibly some other points; gasoline and other products will be distributed from Cincinnati and Pittsburgh refineries to these water terminals by barge lines; expenditure of \$50,000,000 may be involved. 6-12

Kentucky—Brackett, Griffen & Co., Boston, Mass., and associates, reported, acquiring group of natural gas properties in Ohio, West Virginia and Kentucky, including Fritz Oil & Gas Co., Zanesville, to be merged into company to be known as Atlantic Natural Gas Co.; Willard P. Comstock, Lewisburg, W. Va., Samuel B. Chilton, Charleston, W. Va., reported interested.

La., Monroe—Island Gas Co., Inc., chartered; Jas. A. Noe, Bernhardt Bldg.

La., Shreveport—Port Gibson Oil Corp. incorporated; Sidney G. Myers, 1029 Slattery Bldg.

Miss., Greenwood—City votes July 21 on granting gas franchise to Mississippi Gas & Electric Co., Jackson.

Mo., Joplin—Joplin Refining Co., A. E. Basinger, 512 Porter St., acquired and is operating Wilhoit Refinery on Range line near Royal Heights; serve 20 counties in Southwest Missouri. 6-26

Miss., Pickens—A. M. Lockett & Co., Queen & Crescent Bldg., New Orleans, La., reported, has contract for was compressor, to

provide additional capacity for gas lines of Southern Natural Gas Corp., Birmingham, Ala., and associated companies; will embrace five 1250 h. p. units.

N. C., Gastonia—Gaston Petroleum Co. incorporated; C. E. Rogers, Greensboro; J. P. Mitchell, Atlanta, Ga.

Texas—Cities Service Co., 60 Wall St., New York, soon offer issue of \$118,115,000 5% convertible debentures, due 1950, through Harris, Forbes & Co., New York; proceeds to be used for construction; additional investments, extensions and additions to properties. 6-19

Texas—United Gas Corp., natural gas subsidiary of Electric Bond & Share Co., 2 Rector St., New York, through United Gas Co., 1601 Commerce St., Houston, Tex., a subsidiary, has obtained control of Northern Texas Utilities Co., Wichita Falls, Tex., controlling in fee or by lease gas rights in Amarillo field and owning main pipeline and branch lines extending from this field in southeastern direction to Wichita Falls and has franchises and distributes natural gas in Wichita Falls and 9 other communities. 6-12

Tex., Beaumont—Devers Production Co., capital \$50,000, incorporated; Hampton Tucker, E. M. Shannon.

Tex., Corpus Christi—Houston Oil Co., Houston, has work under way on tank farm project near here; initial work will be battery of from 6 to 10 steel storage tanks, 55,000 bbl. capacity each, connected by pipe line to company's oil producing properties in Bee, Refugio and Webb Counties, calling for more than 100 miles of southwest Texas pipe line construction.

Tex., Fort Worth—Williamson County Oil & Royalty Co. incorporated; S. W. Benniger, W. E. Stoll.

Tex., Houston—Houston Oil Co. of Texas, Petroleum Bldg., increased capital \$35,000,000 to \$37,000,000.

Tex., San Antonio—Deako Oil Co., capital \$40,000, incorporated; E. H. Keator, 603 W. Summit St.

Va., Bluefield—Gulf Refining Co., Frick Annex, Pittsburgh, Pa., construct distributing station; cost \$75,000; erect 2-story building in addition to tanks and garages; steel, conc. and fireproof; install elevators; company has under construction pipe line from oil fields of Oklahoma to Pittsburgh. 6-26

West Virginia—Midland Natural Gas Co., E. R. Diggs, 46 Cedar St., New York, plans issuing \$2,500,000 5 yr. convertible 6% debentures to provide funds for additional properties consisting of more than 23,000 acres natural gas lands in southwestern Pennsylvania and adjoining counties in West Virginia. 6-26

Ice and Cold-Storage Plants

N. C., High Point—Bynum Ice & Coal Co., capital \$75,000, incorporated; J. H. Bynum, W. H. Robinson.

Tex., Denton—City, W. N. Harris, City Engr., receives bids July 14 for equipment and erection of ice plant. See Want Section—Bids Asked. 6-19

W. Va., Welch—Hassel T. Hicks, Archt., McDowell County Natl. Bank Bldg., preparing preliminary plans for wholesale and retail produce company plant. See Want Section—Machinery and Supplies.

Iron and Steel Plants

Mo., Kansas City—In connection with recent combination of American Rolling Mill Co., Middletown, O., and Sheffield Steel Corp., Sheffield, Kansas City, only further development contemplated at Sheffield works at this time is construction of sheet mill to be operated in connection with jobbing mills. 5-22

Land Development

Ark., Berryville—H. W. Ford, Tulsa Trust Bldg., R. K. Weldon, 1109 S. Cheyenne St., Tulsa, Okla., reported, develop 1460 acres in Carroll County; erect summer cottages, etc.

Fla., Bradenton—Manatee River Citrus Co., Inc., chartered; M. M. Whealon, F. A. Edwards.

Fla., Daytona Beach—Florida East Coast Bulb Farms, Inc., incorporated; Wm. M. Cobb, 248 1/2 S. Beach St.

Fla., Fort Myers—Salem Co., incorporated; W. B. Rogers, R. E. Kurtz.

Fla., Miami—Tropical Avocado Groves, Inc., chartered; J. S. Eaton, Ingram Bldg.

Fla., Miami—Shipp & Head, Inc., chartered; Wm. W. Shipp, Security Bldg.

Fla., Miami—Jenks & Kasper, Inc., chartered; Arthur W. Jenks, 1376 S. W. 16th St.

Fla., Milton—Stephen Lee, Engr., 316 W. Strong St., Pensacola, reported, making survey of 30,000 acres in Santa Rosa County for colonization.

Fla., Miami Beach—Shore Line Builders, Inc., Liggett Bldg., Jacksonville, reported, has contract at \$125,000 for 8000 ft. seawall to protect property of Ocean Beach Heights Co., S. N. Tatum, V. P., 184 S. E. 14th St., Miami; project south of Baker's Haulover includes winter colony extending from Biscayne Bay to ocean, polo fields, private beach, etc.; J. Julien Southworth, Atty., First Natl. Bank Bldg., Miami. 1-9

Ga., Atlanta—Asa G. Candler, Jr., Candler Bldg., reported, acquired interest in West Cemetery Assn. owning cemetery on Lucille Ave.

La., Jennings—Jennings Nursery Co., Inc., capital \$50,000, incorporated; Frederick Huber.

La., New Orleans—Zig-Zag, Inc., chartered; Harold Ziegler, 218 Canal St.; develop golf course.

Tex., Mercedes—American Rio Grande Land & Irrigation Co., Harry L. Seay, Pres., advises may improve 10,000 acres North Capisall tract, but have not completed preliminary work. 6-19

Md., Baltimore—Edward B. Passano, Inc., Mt. Royal and Guilford Aves., chartered.

Md., Hagerstown—Security Real Estate & Mortgage Co., 125 W. Washington St., developing 6 acre subdivision south of city; grade streets, erect dwellings, etc.; C. J. Kleinbart, Archt., 27 W. Washington St.; expend \$20,000 this year. 6-26

Miss., McComb—Walter Sconiers, DeFuniak Springs, Fla., constructing amusement park on Quin's Bridge Rd.; construct swimming pool, dancing pavilion, wading pool, etc.

Mo., Kansas City—Kansas City Miniature Golf Corp., incorporated; S. C. Hudson, 5030 Tracy Ave.

Mo., Kansas City—Midwest Amusement Co., incorporated; Walter C. Jacobson, 3533 Park Ave.; develop golf courses.

Mo., Kansas City—Realty Holding Corp., incorporated; Herbert V. Jones, 713 National Fidelity Life Bldg.

Mo., St. Louis—J. M. White & Co., 4646 S. Compton St., develop 80 acre subdivision on Clayton Rd.

Mo., St. Louis—Bogey Golf Club, A. L. Shapleigh, Pres., 6 Portland Ave., plans acquiring 62 acre golf course.

Mo., St. Louis—Wano Realty Co., capital \$40,000, incorporated; Oscar Nohl, First National Life Bldg.

N. C., Asheville—Dr. T. C. Smith Realty Co., capital \$600,000, incorporated; Frank S. Smith, 150 Hillside Ave.

N. C., Charlotte—M. B. Rose Co., incorporated; M. B. Rose, 3 E. Third St.; John Small, Jr.

N. C., High Point—Meadowbrook Golf Course, Inc., capital \$25,000, incorporated; P. A. Warner, R. M. Willard.

Okla., Oklahoma City—A. O. Campbell, Chmn., City Planning Comsn., recommended inclusion of \$2,000,000 for development of city parks in city bond issue.

S. C., Union—Union Golf Course, incorporated; Lewis W. Perrin, E. Maurice Garner.

Tex., Corpus Christi—South Beach Terrace Co., Hal Walton, Mgr., develop resort colony; grade streets; install lights.

Tex., Corsicana—City plans \$20,000 improvements to city park.

Tex., Harlingen—J. S. Snyder & Son, Inc., capital \$68,000, incorporated; J. S. and C. F. Snyder.

Tex., Houston—V. D. Wilson Realty Co., 711 Kirby Bldg., organized by V. D. Wilson.

Tex., Houston—H. Lucher Brown, Esq., Esq., Bldg., acquired 40 acres nr. San Felipe Rd. south of Buffalo Bayou.

Tex., LaFeria—Valley Memorial Park Assn., A. F. Parker, Pres., developing 22 acres east of city for Restlawn Memorial Park; are ready to lay driveways and plots; expend \$150,000 for initial improvements, including 886 ft. of conc. and iron fence; sunken gardens and pond; install drainage and sprinkling system; erect administration building and care takers home; contract to be let this week on all work; R. Newell Waters, Archt., Weslaco; S. W. Allen, Constr. Engr., Mercedes; Baker Potts, Landscape Archt., LaFeria. See Want Section—Miscellaneous and Machinery and Supplies. 6-26

Va., Norfolk—Lynnhaven Estates, Inc., capital \$35,000, incorporated; E. T. Penzold, 428 Bedgate Ave.

Va., Alexandria—Remgate Land Co., Inc., chartered; Edmund C. Fletcher.

Va., Martinsville—Baldwin Miniature Golf Course, Inc., chartered; Harry T. Atkins.

Va., Stephens City—James L. Gardner, Inc., capital \$50,000, chartered; James C. Gardner.

W. Va., Berkeley Springs—Morgan Fruit Growers, Inc., capital \$195,000, incorporated; M. W. Fulton, H. D. Beeler.

Lumber Enterprises

Ark., Little Rock—Ayer & Lord Tie Co., Bathurst Bldg., reported, enlarge North Little Rock plant, following consolidation with American Tar Products Co.

Ky., Louisville—Ohio Valley Lumber Co., capital \$20,000, incorporated; W. R. Grave-meyer, 147 N. Keats St.

Miss., Macon—R. J. Edmonds and J. P. Pierce will rebuild burned Edmonds planing mill.

N. C., Haynesville—Traders Lumber Co., capital \$100,000, incorporated; W. S. Merritt, Hugh L. Moore.

Okla., Blackwell—Ansdan Lumber Co., W. A. Hays & Son, Black & Co. and Cragin Lumber Co. acquired Spurrier Lumber Co. and Chikaskia Lumber Co.

Va., Norfolk—Camp Mfg. Co., Franklin, applied to State Corp. Comsn. for permission to increase authorized capital from \$500,000 to \$3,100,000; company has mills at Franklin, Va., and Wallace, N. C.; Marion and St. Stephens, S. C.

W. Va., Cowen—Howard-Herold Lumber Co., Clarence D. Howard, acquired 3000 acres hardwood timber on Duck Creek, Braxton County, containing 25,000,000 ft. of lumber; construct 8 mile railroad line; will have cutting capacity of 35,000 ft. per day. 6-12

Mining

North Carolina—W. F. Thirkildson, Lake Phelps, and New Bern and C. B. Spencer, Statesville, reported, interested in organizing company for development of marl beds on Trent River near New Bern and peat beds around Lake Phelps.

S. C., Columbia—Atlantic Granite Co., Inc., chartered; George D. Lott, 605 Capital Place.

Tex., Freeport—Freeport Sulphur Co., Chanin Bldg., 122 E. Forty-second St., New York, advises in regard to contemplated project for drilling sulphur tests at Black Bayou, Cameron Parish, La.; Company has acquired through lease from Shell Petroleum Corp., sulphur rights on salt dome caprock area, approximately 700 acres, in typical Louisiana marsh country approximately 7 miles southwest of Vinton oil field and 2½ miles from Lake Charles 300 ft. ship channel; depth to top of rock at this location ranges from 900 ft. at apex to 1300 ft. on perimeter; contract provides for drilling 8 prospect wells; drilling to begin July 15; prospect operations under supervision of D. T. Melver, Supt. of Exploration, 705 Esperson Bldg., Houston. 6-28

Virginia—Marshall Haney, Const. Engr., Geer, Va., advises group of Ohio capitalists seek favorable location in Virginia for modern electric manganese furnaces; later will make complete survey.

Miscellaneous Construction

Arkansas—President Hoover signed Ragon bill appropriating \$5,000,000 for flood control work on Mississippi River and its tributaries and for repairing damage done to levees by previous floods, including that of 1927.

Fla., Miami Beach—See Land Development.

Florida—J. L. Webster, Miami Beach, reported, has contract for jetty at Hillsborough inlet lighthouse.

Fla., Okeechobee—A. W. Young, Sec., Okeechobee Flood Control Bd., reported, plans expenditure of \$40,000 for repairs on lake dykes; Ben Hur, Resident Engr., Flood Control Bd.

La., New Orleans—Bd. of Commrs., Port of New Orleans, Court Bldg., reported, received low bid from Thomas Carey, Pan-American Bldg., at \$59,687, for construction of conc. foundation on timber piling for Mandeville St. wharf; American Creosote Works, New Orleans, low bidder for 910 creosoted piles. 6-19

La., Shreveport—City Comsn. Council, reported, postponed indefinitely bids for construction of proposed 3 row pile dike, 1200 ft. long on right bank of Red River. 6-5

Md., Annapolis—Frederick M. Payne, Asst. Sec. of War, Washington, D. C., approved application of Chance Marine Construction Co., Severn Ave., Eastport, Annapolis, to construct yacht basin at mouth of Spa Creek in Annapolis Harbor; anchorage will be formed by timber bulkhead and a breakwater, filling to be supplied by harbor dredging.

Mississippi—Bd. of Miss Levee Commrs., Greenville, open bids July 14 for construction of 20,000 cu. yds. sub. levee work at Ellesey, Issaquena County, 9 miles south of Mayersville; at Moon Landing in Tunica County a 4-mile levee will be built by government under Yazoo-Mississippi delta levee board supervision for which Culbertson & Co., Union Trust Bldg., Cleveland, O., is low bidder; government will also construct 6 mile levee south of Greenville and levee improvements at Helena; address J. S. Allen, Chief Engr., Greenville.

Miss., Pontotoc—Bd. of Supervisors Pontotoc County, receives bids July 8 for levee in Gwin and Yocona creek bottoms. See Want Section—Bids Asked.

Mo., Kansas City—Ismet-Hincke Milling Co., Eighteenth and Delaware Sts., reported, receiving bids for 500,000 bu. rein. conc. addition to grain elevator; cost \$40,000; Industrial Engineering Co., Engrs., 620 Central Bldg. 6-19

Mo., St. Louis—U. S. Engineer Office, 428 Custom House, receives bids July 16 for 4000 ft. timber crib dikes in Mississippi River at Slim Island.

Tenn., Nashville—Memorial Plaza—See Electric Light and Power.

Tex., Corsicana—City construct \$25,000 incinerator, 2 units, each capacity 2 tons per hour.

Tex., Houston—Wm. A. Smith, reported, low bidder at \$87,000 for installation of 4 miles railroad tracks at port terminal yards giving additional storage of about 300 cars and construction of 3 miles track at public grain elevator. 5-29

West Virginia—State Roads Comsn. receives bids for 2 fills. See Roads, Streets, Paving.

Miscellaneous Enterprises

Ala., Anniston—Ogletree Construction Co., constructing cleaning plant on Fourteenth St., near Noble for Fred Bell; brick and conc.; 40x50 ft.

Ala., Birmingham—City rebuild dam of lake on Highland Park golf course; will face with conc. and provide flood gate and spillway.

D. C., Washington—Ch. Bureau of Yards and Docks receive bids July 16 for 1-story, steel frame smelting plant. See Want Section—Bids Asked.

Fla., Arcadia—DeSoto Dairy Products Co., incorporated; F. E. Fessenden, Clark Orr.

Fla., Jacksonville—Tungacres, Inc., chartered; Buckner Chipley, 2129 Montague Terrace; tung oil products.

Ga., Columbus—R. W. Page Corp., 1321 Broadway, Publishers of Enquirer-Sun and Columbus Ledger, acquired Garrard estate property S. E. cor. Twelfth St. and Front Ave., also option on 3-story Garrard Bldg.; will begin work as soon as plans are completed on building. 6-26

Ga., Macon—Swift & Co., 300 Cherry St., reported, let contract to R. H. Smalling & Son, Fourth National Bank Bldg., Macon, for warehouse at Fifth and Plum Sts.; cost \$25,000; plans by engineering dept. Swift & Co.; 3-story and basement; 65x95 ft.; conc. basement floors and walls; built-up roofing, etc. 5-8

Ga., Macon—Arthur T. Vanderbilt, Chmn., Bd. of Public Indemnity Co., Newark, N. J., reported, announced plans for merger of Public Indemnity Co. Hudson Casualty Insurance Co., Jersey City, and Georgia Casualty Co., Macon; new company will have assets of \$8,000,000, capital of \$1,000,000 and \$4,000,000 surplus; executive committee of 3 companies approved plans, which will be submitted to stockholders for referendum; home office to remain in Newark; Public Indemnity to be parent company.

Ky., Horse Cave—Peoples Loose Leaf Tobacco Warehouse Co., increased capital \$50,000 to \$75,000.

Ky., Lexington—Independent Tobacco Warehouse Co., John L. Buckley, Pres., erecting tobacco warehouse, capacity 1,250,000 lbs. 6-19

Ky., Louisville—Emmart Packing Co., 1200 Story Ave., advises made no plans for replacing part of building, recently burned; main portion of building not disturbed.

Louisiana — Southern Kraft Corp., subsidiary of International Paper Co., 100 E. 42nd St., New York, reported, acquired 43,758 acres in LaSalle Parish of International Paper Co.; also acquired lands in Caldwell, Catahoula, Morehouse, Ouachita and Union parishes, and paper mills in Bastrop, La., Camden, Ark., Moss Point, Miss., and Mobile, Ala.

La., Bogalusa—Bogalusa Coca Cola Bottling Co., Ltd., Heron and Shenandoah Sts., construct carbonated beverage plant, capacity 1200 cases daily; foundation completed; 1 building, 60x90 ft.; and 2-story, 28x120 ft.; brick; tile and composition roof; tile and conc. floor; cost \$40,000; Dye & Mullins, Contrs., Columbia, Miss.; Pringle & Smith, Archt., Norris Bldg., Atlanta, Ga.; will install elevator, sprinkler system; George R. Gates, Bogalusa, has contract for heating and power plant; Hub Electric Co., Hattiesburg, Miss., for electric light and power; George R. Gates, Bogalusa, for plumbing; Hamilton Bros., Gulfport, Miss., for roofing.

La., Goodhope—West Coast Kalsomine Co., capital \$100,000, incorporated; John G. Peniman, R. W. Macdonald.

La., Leesville—Leesville Sweet Potato Curing Co., incorporated; M. A. Cavanagh; construct curing plant.

La., New Orleans—Shadowlawn Amusement Co., Inc., chartered; A. F. Lichtentag, 5422 Willow St.

La., Shreveport—Land Building Co., Shreveport, has contract for 1 story, brick, laundry building on Market St.; cost \$15,000.

Md., Baltimore—Otto Randolph, 53 N. Jackson Blvd., Chicago, Ill., has contract for paper plant on Biddle St. near Loney's Lane, for Hinde & Dauch Paper Co., Sandusky, O., and N. Haven St. and Fairmount Ave., Baltimore; 1 story; brick, stone and hollow tile.

Miss., Aberdeen—C. C. Clark, West Point, rejected bids for 1 story and mezzanine bottling plant and office building at S Meridian and Washington Sts., for Aberdeen Bottling Works; P. J. Krouse, Archt., M. & W. Bldg., Meridian.

Miss., Hattiesburg — Southern Industrial Chemical Corp., Box 453, capital \$75,000, incorporated; F. H. Hartman, Pres.; manufacture chemical products including White Goose, non-poisonous, non-inflammable weed killing compound.

Miss., Laurel — Continental Electric and Mfg. Co., First Natl. Bk. Bldg., W. H. Jolly, Pres., has plant under construction, Ninth Ave.; 2 story, 40x165 ft., brick, conc. foundation and floors; L. W. Duffee, Archt., O'Fallon Bldg.

Mo., Kansas City—Wilbur F. Coen, 629 W. 55th St., constructing \$75,000 film exchange, N. W. corner 18th and Wyandotte Sts.; fireproof, 72x118 ft., 1 story, include miniature theatre and screening room; to have sound equipment; to be leased to Fox Film Corp.

Mo., Kansas City — Louis Manufacturing Co., capital \$50,000 incorporated; L. F. Ross, 5646 Paseo St., Kansas City; manufacture, buy and sell toilet articles, soaps, perfumes, proprietary medicines.

Mo., Kansas City—Coronado Theatre Co., capital \$10,000, incorporated; E. E. Elliott, Independence.

Mo., St. Louis—American Paint Journal Co., Allen W. Clark, Pres., will occupy 4 story building Washington Blvd., to contain stores, offices, etc.; front of Carthage stone; fireproof, rein. conc.; building will be operated by Real Estate Management Co.; W. F. Manske & Associates, Inc., Archts., 4064 Olive St.; Wm. H. & Nelson Cunliff Co., 3327 Lindell Blvd., Gen. Contr.

Mo., St. Louis—Model Pants Corp., 808 Washington St., incorporated; Oscar Buckstein.

Mo., St. Louis — Paper Products, Inc., capital \$90,000, incorporated; E. D. Poenman, 1825 Arsenal St.

Mo., St. Louis—Sta-Lite Luminous Products Co., Inc., Suite 611-721 Olive St.; Lester Watson, 611 Chemical Bldg.; all kinds of advertising devices.

N. C., Andrews—Merchants Medicine Co., capital \$100,000, incorporated; J. H. Abernathy, Andrews; N. W. Abernathy, Marble.

N. C., Charlotte—Frans Orange Crush Bottling Co., capital \$75,000, incorporated; L. P. Frans, Hickory.

N. C., Charlotte—Domestic Laundry, Inc., 805 McDowell St., will erect laundry and dry cleaning plant at 801-803 S. McDowell St.; brick and conc.; 45x102 ft.; cost \$55,000.

N. C., Durham—Wright Automatic Tobacco Packing Machine Co., reported, establish plant for manufacture tobacco and tea packing machines.

Okla., Fort Sill, Lawton—McMillen & Shelton, Enid, have contract for \$20,000 cleaning and laundry plant; cost \$20,000.

S. C., Laurens—Domestic Laundry & Dry Cleaning Co., reported, rebuild burned plant on S. Harper St.

S. C., Orangeburg—M. L. Dixon establish 32,000 capacity chicken hatchery.

Tenn., Knoxville—Mississippi Valley Barge Line Co., 408 Pine St., St. Louis, Mo., L. A. Childress, Pres., reported, plans establishing transportation service from Paducah, Ky., to Knoxville, on Tennessee River, contingent on Congress authorizing construction on 9ft. channel in river; contract let by Mississippi Valley Barge Line Co. for construction of 4 large river ships at cost of \$425,000 each; will also have constructed 60 steel covered freight barges, cost \$12,000 each; company will operate from Cincinnati over Ohio River to the Mississippi and thence to New Orleans, La.

Tenn., Memphis—Automatic Coal Burner Co., capital \$25,000, incorporated; R. J. Billings, 2221 Washington St.

Tex., Corpus Christi—Corpus Christi Yacht Basin Co., capital \$20,000, incorporated; Rae A. Easley, 707 "B" St.

Tex., Goose Creek—San Jacinto Creamery, increased capital to \$17,000.

Tex., Goose Creek—Roy Hearne, O. E. Allen, reported, establish mattress plant.

Tex., Jasper—State Game, Fish & Oyster Comsn., Austin, reported, construct \$100,000 fish hatchery on Indian Creek, 8 miles west of city; clearing site of 200 acres; build small dam, form pound 60 to 80 acres in area; contract to be let in open bids.

Va., Danville—L. J. Taylor Tobacco Co., Inc., capital \$75,000, incorporated; L. J. Taylor, 235 Virginia Ave.

Va., Lynchburg—C. B. Cones & Son, 3505 Broadway, New York, E. L. Patrick, Pres., will double capacity of overall plant, Fifteenth and Kemper Sts.

Va., Norfolk—Ch. of Navy Dept., Bureau of Yards and Docks, Washington, D. C., approved expenditure of \$44,800 for major repairs of buildings, water front, railroad tracks and caissons at Navy Yard.

W. Va., Clarksburg—John W. Patton Co., capital \$100,000, incorporated; C. A. Pauley, 212 Pennsylvania Ave., Charleston

W. Va., Fairmont—Imperial Ice Cream Co., Fifth St. and Virginia Ave., acquired plant and equipment of Diamond Ice Cream Co. on East Side.

Motor Bus Lines and Terminals

Ga., Atlanta—A. Hardin, Thomaston, granted permission by Georgia Public Service Comsn., Atlanta, operate bus line between Thomaston and Americus via Bulter and Ellaville.

Ga., Atlanta—Southern Film Transfer Co. granted permission by Georgia Public Service Comsn., Atlanta, to operate bus line, Atlanta to Jacksonville.

Ga., Brunswick — Register Transfer Co., granted permission by Georgia Public Service Comsn., Atlanta, to operate bus line, Baxley to Brunswick.

Ga., Savannah—Price Transfer Co. granted permission by Georgia Public Service Comsn., Atlanta for bus line, Savannah to South Carolina line.

La., Hammond—Hammond Stage Lines, Inc., capital \$50,000, chartered; Martin Pantan.

Mo., St. Louis—St. Louis Motor Service Co., Inc., incorporated; Pete Viviano, M. E. Woodell, 4400 Jennings St.

Mo., St. Louis—Universal Cab Co. incorporated; Robert O. Cathcart, 5135 Wabada Ave.

Tenn., Knoxville—Weaver & McGill, General Bldg., has contract for Union bus terminal rear of Briscoe Bldg.; cost \$100,000. 6-19

Va., Saltville—State Corporation Comsn., Richmond, authorized establishment motor bus line by Newberry Bus Lines between Bland and Saltville.

W. Va., Mullens—Craft Bus Line, acquired lines operating between Mullens and Glen Rogers and Glen Morrison.

W. Va., Parkersburg — Blue and Gray Transit Co., Virginia & Alderson Sts., Charleston, granted permission to operate bus line Parkersburg to Clarksburg.

W. Va., Parkersburg—Safeway Transit Co., Virginia & Alderson Sts., Charleston, granted permission to operate bus line Parkersburg to Brookside.

Railways

Ga., Savannah—Savannah & Atlanta Railway Co., Robt. H. Bradley, Pres., applied to Interstate Commerce Comsn., Washington, for modification of recent order in reorganization proceedings to permit issuance of 30,000 shares of common stock without par value, permitting sale of \$1,300,000 principal amount of 6% first mortgage bonds and 6500 shares of common stock without par value at price to net not less than 90% of principal amount of these bonds and accrued interest.

Ky., Louisville — Henry Bickel Co., 435 Garden St., reported, has contract at \$270,000 for elevation of terminal tracks through Thirty-first St. south to Broadway for Kentucky & Indiana Terminal R. R. Co.

Ky., Shelbyville — R. D. Cole Mfg. Co., Newnan, Ga., reported, has contract for water treating plant for Southern Railway.

La., New Orleans—Louisville & Nashville R. R. Co., A. T. Shanks, Pur. Agt., Louisville, Ky., reported, applied to Interstate Commerce Comsn., Washington, D. C., for permission to purchase control of Pontchartrain R. R. Co., operating short line in New Orleans.

Mo., St. Louis—Illinois Terminal R. R., E. S. Hight, Ch. Engr., Chicago, Ill., reported, let following contracts in connection with construction of rein. conc. and steel elevated double track line to connect present surface line on Twelfth St. with McKinley Bridge, and including southwestern approach to bridge and river pier; steel fabrication, McClintic-Marshall Co., Oliver Bldg., Pittsburgh, Pa.; erection, Ben Hur Erection Co., 5100 Farlin St.; substructure for river pier, G. Locke Tarlton, 411 N. 7th St., St. Louis; river pier, and temporary freight station and office building on Twelfth St. between Wash and Carr Sts., to Fruin-Colnon Contracting Co., Merchants-Laclede Bldg., St. Louis; cost \$1,500,000. 6-5

Tex., Vernon—Chicago, Rock Island & Pacific Ry. Co., W. H. Peterson, Ch. Engr., Chicago, Ill., reported, completed survey of Willbarger County route of proposed extension from Shamrock to Beaver Creek; construction work to begin soon. 5-1

Va., Roanoke—Norfolk & Western Ry. Co., construct 500 additional all steel 50-ton merchandise box cars at Roanoke shops; material will be assembled soon; work to begin in Aug.

Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

Proposed Construction

Ala., Birmingham—City Comsn., plans expending \$63,750 for repaving First Ave. with sheet asphalt; paving Fourteenth St.; A. J. Hawkins, City Engr.

Arkansas—State Highway Comsn., Little Rock, plans 2 conc. roads: From Nettleton to Leachville; from Jonesboro to Walnut Ridge; C. S. Christian, State Highway Engr.

Ark., Booneville — City Commrs. receive bids July 14 for 33,000 sq. yd. 6-in. rein. conc. pavement, excavation, curbing, sidewalk; estimated cost \$99,000; Dickinson & White, Inc., Engrs., 710 Rector Bldg., Little Rock. 12-12-1929

Florida—State Road Comsn., Tallahassee, received low bids for 3 roads: Union County—9.14 mi. 8-in. compacted Florida lime rock base, Road No. 28, Columbia County line to Lake Butler, F. W. Long & Co., Barnett Bldg., Jacksonville, \$80,156; Bradford County—3.50 mi. 6-in. compacted Florida lime rock base, Road No. 68, Hampton to Brooker, Duval Engineering & Constructing Co., Dyal Upchurch Bldg., Jacksonville, \$21,881; Dade County—17,000 cu. yd. rock, Road No. 27, Everglades Construction Co., N. W. Twenty-seventh Ave., Miami, \$11,985; B. M. Duncan, State Highway Engr.

Fla., Jacksonville — City Comsn., M. W. Bishop, Sec., plans widening Pearl St. to 60 ft., Eleventh to Thirtieth St.; and laying sidewalks; W. E. Sheddian, City Engr.

Kentucky—State Highway Comsn., Frankfort, receives bids July 31 for surface paving U. S. Highway No. 41 from Madisonville to McGaw's School, Hopkins County; plans letting contracts on July 31, Aug. 22 and Sept. 26 for improving various roads, including following: Mayo Trail, from Paintsville to Prestonsburg, from Pikeville

to Shelby Bridge, and from Pike-Floyd County line to Pikeville; 7½ mi. road from My Old Kentucky Home, Bardstown to Mahoney's Store; from Campbellsville to Green County line; Carson to Peoria; McHenry to Rockport; Pleasureville to Gratz; Columbia to Liberty; H. D. Palmore, State Highway Engr.

Kentucky—State Highway Comsn., Frankfort, deferred awarding contracts for about 141 mi. gaps on 13 U. S. and Federal Aid Highways; H. D. Palmore, State Highway Engr.

Ky., Frankfort—City, T. E. Kenney, Mayor received bids from following for paving Washington, Wilkinson, Clinton and St. Clair St. with Trinidad asphalt, or Mexican, Texaco or Sinclair oil asphalt; Brewer Sons, Cincinnati; J. M. Perkins Co., Frankfort; Southern Paving Co., New Albany, Ind.; Andrews Asphalt Co., Hamilton, Ohio.

Ga., Atlanta—City Planning Comsn., R. W. Torres, Sec. and Engr., considering widening sidewalks on Hunter St., Pryor to Whitehall.

Ky., Henderson—City Commrs. considering paving First and Ingram St.

Ky., Mayfield—State Highway Dept., Frankfort, plans surfacing with conc. 15 mi. Highway No. 45, from Wingo to Fulton, Graves County; plans retread black top surface on remainder of Highway No. 45, north and south out of Mayfield; H. D. Palmore, State Highway Engr.

La., Benton—Louisiana Highway Comsn., Baton Rouge, receives bids July 15 for 6.6 mi. grading, draining, Route 109, Plain Dealings-Vivian Highway, Bossier Parish; H. B. Henderlite, State Highway Engr.

La., Covington—Louisiana Highway Comsn., Baton Rouge, receives bids July 8 for 2.3 mi. 20-ft wide surface treatment, Rigolets-Salt Bayou Highway, St. Tammany Parish, route No. 2; H. B. Henderlite, State Highway Engr.

Maryland—State Roads Comsn., Baltimore, received low bids for 8 roads and 3 bridges: Baltimore City—1.18 mi. sheet asphalt, Wilkens Ave., DeSoto road to western city limits, National Paving & Contracting Co., Menlo Drive and W. M. E. R., Baltimore, \$146,286; Baltimore County—1.07 mi. conc. shoulders, Gwynn Oak Ave., from Baltimore City limits to Windsor Mill road, Daniel Marine, 236 Albemarle St., Baltimore, \$7895; extension to double span conc. bridge on Gwynn Oak Ave. over Gwynns Falls, A. C. Conaway, Savage, \$7217; Caroline County—1.52 mi. conc., Goldsboro-Delaware Line road, from Goldsboro to Sandy Island Bridge, Highway Engineering & Construction Co., Selbyville, Del., \$26,269; Carroll County—4.87 mi. conc. shoulders, Westminster-Taneytown road, Bear Branch to Fountain Valley, Thomas, Bennett & Hunter, Westminster, \$33,098.

In Cecil County—34 mi. conc. patches on Main St., Port Deposit, G. & L. Contracting Co., 3509 Northern Parkway, Baltimore; Dorchester County—102 mi. conc., from Church Creek toward Gum Swamp, Aiello Construction Co., Gough and Dean Sts., Baltimore, \$25,643; Queen Anne's County—1.23 mi. conc., Sudlersville-Delaware Line road, from Peter's Corner toward Delaware Line, Field, Barker & Underwood, Inc., Commercial Trust Bldg., Philadelphia, Pa., \$28,933; Wilcomie County—7 mi. conc. from Powellville toward Whiton, and .6 mi. from Powellville to Salisbury, Layfield & Waller Paving Co., Salisbury, \$32,848; Montgomery County—extension to triple span conc. arch bridge on Columbia Pike, over Paint Branch, T. D. Claiborne Co., Inc., Garrett Bldg., Baltimore, \$16,137; conc. substructure floor, approaches, etc., for bridge over tracks of B. & O. R. R. at Gaithersburg, T. D. Claiborne Co., Inc., \$103,164. 6-12

Maryland—State Roads Comsn., Baltimore, receives bids July 8 for 8 roads: Harford County—91 mi. conc. or penetration macad., from end of Cont. H-66 north of Federal Hill toward Clermont Mills, Cont. H-80-42; 3.22 mi. conc. shoulders, Coopstown to Jarrettsville; Cont. H-95-411; Montgomery County 1.2 mi. resurfacing with hot or cold bit. mixture, Colesville road, from Burnt Mill to Whiteoak, Cont. M-154-311; .58 mi. conc. shoulders, Leland St., from Wisconsin Ave. to conc. near Bethesda-Silver Spring road, Cont. M-155-311; Prince George's County—7.63 mi. gravel, from Largo to Upper Marlboro, Cont. P-96-34; Queen Anne's County—.58 mi. penetration macad., at approaches to bridge over Kent Narrows, Cont. Q-55-28; St. Mary's County—5.34 mi. conc. shoulders, from Mechanicsville to Helen, Cont. Sm-70-811; Worcester County—25 mi. conc. shoulders, Baltimore Ave., Ocean City, from Ninth to Thirteenth St., Cont. Wo-80-111; L. H. Steuart, Sec.

Maryland—State Roads Comsn., Baltimore, received low bids for 10 roads: Anne Arundel County—73 mi. conc., from end of Cont. AA-79, near Gambrills to Odenton, G. & L. Contracting Co., 3509 Northern Parkway, Baltimore, \$12,012; Charles County—1.52 mi. gravel, from Cross Roads toward Liverpool Point, Jarboe & Houghton, Mechanicsville, \$13,333; Dorchester County—1.21 mi. conc., Finchville-Fredericksburg road, from end of Cont. D-30 toward Federalsburg, P. D. Phillips & Bros., Salisbury, \$16,758; Garrett County—76 mi. conc. shoulders, Oak and Third St., Oakland, J. W. Whorton, Oakland; Harford County—1.30 mi. conc., from Harmony Church toward Darlington, Harry T. Campbell Sons Co., Towson, \$52,548; Montgomery County—1.28 mi. conc. shoulders, Colesville road, from Burnt Mill to White Oak, Loomis Construction Co., 1014 Wisconsin Ave., N. W., Washington, D. C., \$14,608; Prince George's County—6.50 mi. resurfacing with hot or cold bit. mixtures, Baltimore-Washington Blvd., Beltsville to Hyattsville, E. C. Valentine, Frederick, \$60,649; Talbot County—4.51 mi. penetration macad. resurfacing, from State road near McDaniel toward Tilghman, P. D. Phillips & Bros., Salisbury, \$64,495; .84 mi. conc., from bridge at Knapp Narrows, south through Tilghman, P. D. Phillips & Bros., \$19,559; Washington County—44 mi. conc., from Weyerton toward Gapland, Long, Tenney & Co., Hagerstown, \$14,070; L. H. Steuart, Sec. 6-19

Md., Baltimore—City, Bd. of Estimates, approved ordinances providing for opening, widening and grading 6 streets and avenues, including Fayette St., Fallsway to Front; Echodale Ave., Harford to Belair road; Sinclair lane, Moravia road, Gunter and Race Sts.; Nathan L. Smith, Highways Engr.

Mo., Clayton—St. Louis County, Walter E. Miller, Clk., receives bids July 9 to improve St. Milton Ave., Dade and Maryland Ave., Delmar St., Scenic Drive, Big Bend road from Wilshusen to Webster Groves; Lincoln Ave.; Roy Jablonsky, County Engr.

Mo., Clayton—St. Louis County, Walter E. Miller, Clk., received low bids for 3 roads: 6613 ft., Grasser road, bit. asphalt, A. Emory, Jr., \$28,942; 3180 ft. Denny road, 20-ft. conc. slab, Webb-Boone Paving Co., 5103 Fyler Ave., St. Louis \$30,531; 6403 ft. Jennings Station road, 20-ft. conc. slab, Keeley Brothers Contracting Co., 4301 State St., East St. Louis, Ill. 6-19

Mo., Kansas City—Jackson County let contract to Drexel Constructing Co., 816 N. Eighth St., at \$26,812 and \$8,212, respectively for rein. conc. bridge and grading, paving, Prospect Ave. road.

Mo., St. Louis—City, Bd. of Public Service, receives bids July 15 to improve McLaren Ave., from Church road to Oxford lane; W. W. Horner, City Engr.

N. C., Charlotte—Mecklenburg County Superior Court considering opening and widening South College St. 3-6

N. C., Greensboro—State Highway Comsn., Raleigh, will widen Route 10 between Guilford County home and intersection of Route 10 and Route 100 near Whitsett, Guilford County.

N. C., Winston-Salem—City, Public Works Dept., Harry L. Shaner, Commr., received low bids from W. H. Paris, 2419 Glenn Ave., C. A. Hellig, W. Highlands, and W. R. Thomas, 260 W. End Blvd., for cement conc. sidewalks on 6 streets. 6-19

Tenn., Chattanooga—Hamilton County Highway Comsn., Will Cummings, Judge, plans expending \$150,000 for conc. boulevard up Lookout Mountain, and \$20,000 for conc. boulevard around east brow of Signal Mountain; C. G. Murrell, County Engr.

Tex., Angleton—Brazoria County, reported, considering expending \$1,300,000 for roads in Special Road Dist. No. 29; Scott Gaines, County Judge. See Financial News Columns.

Tex., Amarillo—City, Ernest O. Thompson, Mayor, plans receiving bids for alternate types of paving cost \$70,000; E. N. Stanley, Engr.

Tex., Beaumont—City Comsn., Paul H. Millard, Mgr., plans letting contract to Broussard-Warfield Co., at \$91,641, to pave sections of Elgie, Emmett and Corley St.; R. C. Black, City Engr. 6-19

South Carolina—State Highway Comsn., Columbia, received low bids for 29 roads and 14 bridges, totaling about \$3,000,000: Anderson and Greenville Counties—4.8 mi. topsoiling, Route 247, Belton to Cooley Bridge, C. M. Lyle Construction Co., Gainesville, Ga., \$49,739; Berkeley County—5.7 mi. sand-clay surface, Route 31, H. M. Taylor, Ridgeland, \$28,086; 6.4 mi. sand-clay surface, Route 402, Richardson Construction

Co., Charleston, \$29,023; Cherokee County—5.8 mi. grading, Route 29, Gaffney-Blacksburg road, Jamison Bros., Inc., Nashville, Tenn., \$40,203; 21.3 mi. grading, Route 9, Chester to Fort Lawn, W. B. Boyle Co., Sumter, \$43,179; Route 309, Cornell-Young Co., Macon, Ga., \$104,314; combination of 2 projects, Spartanburg Construction Co., Spartanburg, S. C., \$104,059; Chesterfield County—24 mi. Route 33, sand-clay surface, from Pageland to McBee, Jamison Brothers, Inc., \$150,535; Fairfield County—4.4 mi. grading, Route 21, Simpson to Ridgeway, Harrison Wright Co., Charlotte, N. C., \$38,844; 8.5 mi. topsoil surface, Route 215, Richland County line to Jenkinsville, Wilson Construction Co., Technical Bldg., Asheville, \$65,005.

In Laurens County—16.4 mi. grading, Route 15, Princeton to Laurens, Jamison Brothers, Inc., \$75,143; McCormick County—13.5 mi. grading, Route 20, Parksville to point near Furey's Ferry on Savannah River, Smith & Bradfield, Macon, Ga., \$72,238; Newberry County—5.7 mi. grading, Route 176, Whitmire to Newberry, Harrison-Wright Co., \$41,835; 3.8 mi. topsoil surface, Route 56, north of Chappells, S. M. Cooper & Son, Ninety-Six, \$28,443; Oconee County—4.8 mi. clay-bound macad., Routes 2 and 24, Mountain Rest to Georgia State line, C. M. Lyle Construction Co., \$76,648; Union County—14 mi. topsoiling, Route 92, Union to Tyger River, Spartanburg Construction Co., \$99,714; 9 mi. topsoiling, Route 9, Lockhart to Kelley Station, Carroll Suber Construction Co., Newberry, \$53,048; Clarendon and Wilkingsburg Counties—17 mi. grading, Route 26, Richardson Construction Co., \$43,510.

In Williamsburg County—23 mi. grading, Route 26, Kingstree to Andrews, Sanford & Brooks Co., Peoples Bldg., Charleston, \$94,711; Aiken County—paving gaps on Route 1, Lexington-Aiken County line to Augusta, R. G. Kennedy, Batesburg, \$24,025; Chester County—14 mi. surface treatment, Route 7, Chester to Broad River, Carolina Road Surfacing Co., Capers Bldg., Greenville, \$46,150; Fairfield and Chester Counties—3.4 mi. surface treatment, Route 215, Richland County line to Route 7, Carolina Road Surfacing Co., \$162,836; Lancaster County—7 mi. surface treatment, Route 93, Carolina Road Surfacing Co., \$41,261; Oconee County—9 mi. surface treatment, Route 13, Westminster to Georgia State line, Carolina Road Surfacing Co., \$90,635; 10 mi. Routes 2 and 24, Walhalla to Mountain Rest, Carolina Road Surfacing Co., \$59,120; Orangeburg - Bamberg Counties—19 mi., Route 8, North to Denmark, Carolina Road Surfacing Co., \$95,787.

In Bamberg-Colleton and Hampton Counties—38.9 mi., Routes 36 and 64, Bamberg to Hampton and from Ehrhardt to Route 641, alternate No. 1, C. G. Fuller, Barnwell, \$228,519; alternate No. 2, same contractor at \$231,799; Saluda County—12.9 mi. Route 390, Saluda to Saluda River, MacDougald Construction Co., 289½ Peachtree St., N. E., Atlanta, Ga., \$67,606; Lexington, Saluda and Newberry Counties—14 mi. Route 391, Batesburg to Saluda River, MacDougald Construction Co., \$74,244; Lancaster County—8.9 mi. grading, Route 26, Lancaster to point near Pleasant Hill, N. J. Morgan, Talladega, Ala., \$40,365; 8 mi. grading, Route 26, Pleasant Hill to Kershaw County line, N. J. Morgan, \$23,671; Abbeville County—rein. conc. bridge over Little River, R. M. Mitchum, 1231 Belmont Drive, Augusta, Ga., \$30,873; Barnwell and Orangeburg Counties—rein. conc. and timber and steel bridge over South Edisto River, between Williston and Springfield, Florida Bridge & Construction Co., 49 Lorna Doone Blvd., Orlando, \$20,140.

In Chesterfield County—rein. conc. bridge over Thompson's Creek near Cheraw, Route 1, alternate No. 1, Dudley Murphy Construction Co., Wagg-Wilson Bldg., West Palm Beach, Fla., \$57,615; alternate No. 2, Small & Triplett, Bethune, S. C., \$56,565; Edgefield County—addition of two 22-ft. spans to present bridge over Turkey Creek, between Edgefield and Greenwood, Claussen-Lawrence Construction Co., Gwinnett St., Augusta; Greenwood and Laurens Counties—rein. conc. bridge over Saluda River near Ware Shoals, George A. Thompson & Co., Macon, Ga., \$92,142; Horry County—2 bridges in Lumber river swamp near Nichols, Route 17, Florida Bridge & Construction Co., \$10,676; Lee County—addition of six 22-ft. spans to present bridge in 'Scrape' Ore swamp, Route 30, Wannamaker & Wells, Orangeburg, \$7383; Spartanburg County—rein. conc. bridge over North Tyger River, Route 10, Moore to Spartanburg, Geo. A. Thompson & Co., \$27,096; Clarendon County—2 rein. conc. bridges and timber bridge, Route 26, Manning toward Kingstree, D. M. Rickenbaker, Union, \$34,344; Aiken County—addition of four 22-ft. spans to present bridge over Edisto River, Route 1, R. M. Mitchum, \$5766; conc. bridge over Horse Creek, Route 1, Aiken to Augusta, R. M. Mitchum, \$19,309; Charles M. oMorefield, Ch. Highway Engr.

S. C., Greenville—City Council, B. F. Dil-

lard, Clk. and Treas., considering paving McDaniel Ave., Sullivan, Randall, Robinson, Arlington, Vannoy and Stone St.; cost about \$24,000. See Financial News Columns.

S. C., Heath Springs—City plans expending \$10,000 for street improvement. See Financial News Columns.

Tennessee—Dept. of Highways and Public Works, Nashville, receives bids July 18 for 7 roads and 6 bridges: Madison County—8.278 mi. paving Highway No. 20, State Highway No. 1 to Henderson County line; Sequatchie County—6 mi. grading, draining, Highway No. 113, Hamilton County line to Anderson's Gap; Macon County—7 mi. grading, draining, Highway No. 15, Meadowville to Lafayette; Polk County—7 mi. grading, draining, Highway No. 74, between Tennessee Electric Power Co. plant No. 2 and Rock Creek; Williamson County—11.233 mi. paving, Highway No. 100, Hickman County line to Davidson County line; Marion County—paving approach to bridge over Battle Creek near Kimball, and approaches to bridge at Jasper, on 1,072 mi. Highway No. 27; paving 10.440 mi. Highway No. 2, between Dove and State Highway No. 27; Fayette County—5 timber bridges on Highway No. 76, Moscow to Somerville; Grainger County—conc. bridge over Briar Fork Creek, near Tate Springs on .1 mi. Highway No. 1; T. E. McEwen, State Highway Engr.

Tenn., Chattanooga—City, E. D. Bass, Mayor, considering paving Dodson Ave. and widening Frazier Ave.; W. H. Wilson, City Engr.

Tenn., Lexington—Dept. of Highways and Public Works, Nashville, plans graveling Highway No. 22 between Lexington and Carroll County line; conc. Highway No. 100 across south side of Henderson County; T. E. McEwen, State Highway Engr.

Tenn., Somerville—Dept. of Highways and Public Works, Nashville, authorized grading and draining 17 mi. State Highway No. 59, from Route No. 1, Braden to Somerville, intersecting State Highway No. 15, Fayette County; work to be done by highway dept. forces; T. E. McEwen, State Highway Engr.

Texas—State Highway Comsn., Austin, plans receiving bids for 7 mi. hard surface No. 29, Caldwell County, from north of Lockhart to Travis County line; construction of bridge over Neches River, Highway No. 40, Tyler County; authorized 5 mi. asphalt paving, Highway No. 76, Shelby County, from Center toward Joaquin; will surface 7.6 mi. Highway No. 29, from Fayetteville to Houston, within next 2 months; Gibb Gilchrist, State Highway Engr.

Tex., Beaumont—City Comsn., Paul H. Millard, Mgr., considering paving Live Oak, Pine St. and Texas Ave.; R. C. Black, City Engr.

Tex., Corpus Christi—City, Theo. Koester, Sec., plans receiving bids to pave 3 streets, connecting Ocean Drive with paved streets; Craig, Elizabeth and Booty St.; plans paving Antelope St. 40 ft. wide.

Tex., Dalhart—City Council plans expending \$30,000 to curb, gutter, drain and pave Chicago St., and extend sewer into Kendrick Addition. See Financial News Columns.

Tex., Fort Worth—City, O. E. Carr, Mgr., considering improving Rosedale trafficway between eastern city limits and S. Main St.; D. L. Lewis, City Engr.

Tex., Galveston—State Highway Comsn., Austin, considering temporary bit. topping on Galveston-Port Arthur Highway; Gibb Gilchrist, State Highway Engr.

Tex., Houston—City Council, W. E. Monteith, Mayor, approved plans for 60-ft. street, 42-ft. pavement, Holly St., Washington Ave. to Dart St.; J. M. Nagle, City Engr.

Tex., Houston—City, Walter E. Monteith, Mayor, and Harris County, Norman Atkinson, Judge, plan paving Wayside Dr.; Twentieth and North Main St.; Lyons Ave.; Clark-Hill St.; J. M. Nagle, City Engr.; Chas. R. Haile, County Engr.

Tex., Houston—City, W. E. Monteith, Mayor, and Harris County, Norman Atkinson, Judge, receives bids July 16 for paving Washington St., 50 ft. wide, from Yale to Reinermann St.; J. M. Nagle, City Engr.

Tex., Houston—City, W. E. Monteith, Mayor, plans receiving bids to widen Alabama Ave. 25 to 30 ft., from Milam to Fannin; estimated cost \$6800; J. W. Nagle, City Engr.

Tex., Rusk—Cherokee County plans expending \$250,000 for roads in Dist. No. 1. See Financial News Columns.

Virginia—State Highways Comsn., Richmond, receives bids July 15 for 3 roads and 2 bridges: Page County—5 mi. macad., Route 815, Stanley to Newport, 57,749 sq. yd. macad., 66,295 cu. yd. excavation, 14,491 lb. rein. steel; also bridge over Stoney Run, 8985 lb. rein. steel; Bedford County—3 mi. macad. or conc., Route 14, from Lynchburg, west, 34,194 sq. yd. macad. or conc., 44,493 cu. yd. excavation; Norfolk-Nansemond Counties—2.5 mi. conc., Route 503, Churchland to Bellville, 25,615 sq. yd. conc., 20,897 cu. yd. excavation; Prince William County—2 bridges over Chappawamsic Creek, each 30 ft. conc. span, 7 m. from Quantico, 22,670 lb. rein. steel; C. S. Mullen, Ch. Engr.

Virginia—State Highway Comsn., Richmond, receives bids July 8 for 3 roads and bridge: Augusta County—macad. roadway on approaches to bridge on Route 39; Grayson County—1.2 mi. grading, draining, Route 26; Clarke County—2.4 mi. macad., Route 54; King William County—repair fender system of Gresham Bridge over Mattaponi River, Route 30 at West Point; C. S. Mullen, Ch. Engr.; lately noted bids July 1, 6-19

Va., Richmond—City, R. Keith Compton, Dir. of Public Works, plans expending about \$250,000 for smooth paving next year, including Boulevard, north of Richmond, Fredericksburg and Potomac Ry. Bridge and Patterson Ave.

West Virginia—State Road Comsn., Charleston, receives bids July 22 for 10 roads, 4 bridges, sewer, fills: Boone County—5 mi. rebuilding with bit. macad., modified bit. or retread, Raelne-Drawdy Creek road; Cabell County—13 mi. cement conc., Barboursville-Culloden road; Greenbrier County—7 mi. grading and bit. macad., Wilson-Lewisville; Hardy County—1.2 mi. grading, conc., Moefteld-Oldfield road; Jefferson County—1.8 mi. widening conc. pavement, Harpers Ferry-Bollivar road; Kanawha County—2.7 mi. retread, Albans-Coal Mountain road; 1 mi. widening Kanawha City-Garnet road; Monroe County—9 mi. cold tar surface treatment, Rock Camp-Paterson road; Putnam County—3 mi. grading, draining, Redhouse-Paradise road; Wetzel County—8 mi. gravel surface, Wileyville-Sugar road; Grant County-Maysville Bridge; three 26-ft. spans, conc. slab; Raleigh County—Little Beaver Creek Bridge, conc. arch extension, 40-ft. span; Ritchie County—Den Run Bridge, conc. arch, 60-ft. span; Tyler County—6 mi. Garrett Creek culvert and 20-ft. span; Hancock County—storm sewer in Weirton; Logan County—rock fill on Davin-Wyoming County line road; Wayne County—6 mi. Garrett Creek culvert and fill; C. P. Fortney, Chmn.

W. Va., Charles Town—State Highway Comsn., Charleston, receives bids July 22 for 2.7 mi. widening and retread, Charles Town-Dalley Bridge road, Jefferson County; C. P. Fortney, Chmn.

W. Va., Charleston—Kanawha County Court receives bids July 21 for 15 roads: ¾ mi. bit. top surfacing road at Glen Falls, Coal Dist.; 2.2 mi. bit. surfacing, Tennille-Jarvisville road, on Jarvisville end, in Union and Tennille Dist.; bit. surface Elliott road, from mouth of Gregory's Run to Shinnston-Middlebourne Pike, Eagle Dist.; Clark Dist.—1 mi. grading, draining, Davison Run road; Clay Dist.—½ mi. stone base, down Binghamon Creek at Pine Bluff; Eagle Dist.—1 mi. stone base, from present improved road in Binghamon Creek to Oakdale; Elk Dist.—½ mi. grading and stone base, Gnatty Creek, toward Johnstown; Dist.—2 mi. stone base, Clarksburg-Weston road, between Lost Creek and McWhorter; Cardis Dist.—½ mi. stone base on Isaac's Creek road, ½ mi. stone base, Shinnston-Middlebourne road, above Wallace; extending hard surfaced road to point near Doddridge County line; Simpson Dist.—1 mi. stone base, Philippi pike, on Brushy fork of Simpson Creek; Tenmile Dist.—1 mi. stone base, Hall's Run road at Lake Floyd; Union Dist.—½ mi. stone base, Buffalo Creek road; ½ mi. extension stone base, Isaac's Creek road; County Road Dept. will grade and stone base 1½ mi. Sycamore Creek road; surface treat following roads: Mudlick macad. road in Clay Dist.; bit. macad. Philippi pike, at Grassell; road from Kincheloe to Arthur Rhoades Farm, Union Dist.; Kincheloe road from farm to Mineral; 1 mi. stone base, Cunningham's Run road; 2.9 mi. on Jones Run road, Eagle Dist.

Contracts Awarded

Ala., Birmingham—City, Eunice Hewes, Clk., let contracts for paving 11 streets, including Thirteenth, Seventeenth Ave., Twentieth, Delta St., at \$77,178; Independent Paving Co., 3828 First Ave., South; Fromhold Bros., 1768 Tuscaloosa Ave.; Morgan-Hill Paving Co., Woodward Bldg.; M. B. Grennough 2736 Bish Blvd., Ensley; Mitchell Bros., 3828 First Ave., South; Dunn Construction Co., Lincoln Life Bldg.; A. J. Hawkins, City Engr.

Ala., Huntsville—Madison County Comms. let contract to Herbert & Cargile at \$17,000 for paving Fifth St. from city limits to Oakwood Ave. and Oakwood Ave. to Meridian Pike intersection. 5-29

Ark., Fort Smith—Comms. of Paving Dist. No. 44 let contract to McEachin and Luke Construction Co., The Home Insurance Bldg., Little Rock, at \$13,021, for paving North Thirty-third and Thirty-fourth Sts., Grand Ave. to North L St.; W. L. Winters, Engr.; Fagan Bourland, Mayor. 6-12

Ark., Hot Springs—State Highway Dept., Little Rock, let contract to C. L. Besler, Winona Ave., Hot Springs, at \$19,435, for ¾ mi. conc. paving, Hot Springs-Junction No. 6 road, Garland County. 6-26, under Arkansas.

Ark., Morrilton—City let contract to Mobley Construction Co., Morrilton, at \$44,246, for 1 mi. paving in Annex No. 2 to street paving Improvement Dist. No. 4, including North St. Joseph St.

Georgia—State Highway Bd., Atlanta, let contracts for 9 roads and 3 bridges, totaling \$1,753,134: Bulloch County—16 mi. conc., between Swainsboro and Stateboro, Campbell Contracting Co., 1312 10th Ave., Columbus, \$354,856; Habersham and Hall Counties—10 mi. conc., Gainesville to Baldwin, Carolina Contracting Co., 1112½ Taylor St., Columbia, S. C., \$267,024; Houston County—13 mi. conc., Perry to Hawkinsville, Wesco Co., Volunteer Life Bldg., Chattanooga, Tenn., \$259,224; Barrow and Jackson Counties—9 mi. alternate types paving, Winder to Jefferson, MacDougald Construction Co., 545 Angler Springs Road, Atlanta, \$228,771; Cobb County—7 mi. conc., Atlanta to Austell, Whitley Construction Co., LaGrange, \$161,155; Grady County—7 mi. grading, bridge, between Thomasville and Tallahassee, Pittman Construction Co., Rhodes Bldg., \$46,954; Houston County—5 mi. surface treatment on limerock, Macon to Perry, Campbell Construction Co., \$19,153; Lowndes County—14 mi. surface treatment on limestone, Valdosta to Waycross, Duval Engineering & Construction Co., \$213,981; Pike County—6 mi. conc., tion Co., Dyal Upchurch Bldg., Jacksonville, Griffin to Zebulon, Noonan Construction Co., E. Lloyd St., Pensacola, Fla., \$153,814; Barrow-Jackson Counties—bridge on Winder-Jefferson Highway, D. B. Schot & Co., Decatur, \$18,745; Clarke-Oconee Counties, bridge between Athens and Watkinsville, Beckham-Lawler Co., Perry, \$29,863; B. P. McWhorter, State Highway Engr. 6-5, 6-12.

Ga., Rome—City, S. S. King, Mgr., let contract to Minge Construction Co., Rome, at \$10,836, for 2,662 sq. yd. conc. sidewalks, and 5,947 lin. ft. conc. curb and gutter; Robert & Co., Inc., Consit. Engrs., 766 Bona Allen Bldg., Atlanta.

Kentucky—State Highway Comsn., Frankfort, let contract to E. L. Traugher, Elkton, Ky., at \$239,048, for 12,971 mi. rock asphalt, Hopkinsville-Guthrie road; H. D. Palmore, State Highway Engr. 6-26

Kentucky—State Highway Dept., Frankfort, let contracts for 3 roads: Fulton County—6.178 mi. 18-ft. conc. paving, Fulton-Clinton road, Nelson Bros., Columbian Mutual Tower, \$125,784; McCracken County—6.432 mi. 18-ft. rein. conc., Paducah-Mayfield road, Nelson Bros., \$141,555; McCreary County—1.767 mi. 18-ft. retread on limestone ebase, Carey-Reed Co., Guaranty Bank Bldg., Lexington, Ky., \$29,682; H. D. Palmore, State Highway Engr. 6-19

Ky., Henderson—City Comms. let contract to Premier Construction Co., to pave Center St. with Warrenite bitulithic, from Elm to Clark.

La., Rayville—City, Mayor and Bd. of Aldermen, let contract to R. L. Young, Bastrop, at about \$14,000, for paving First and Rhymes St. with 6-in. plain and 6-in. rein. conc.; work to start immediately; M. L. Culley, Engr., Jackson, Miss. 6-19

Miss., Newton—Town, Mayor and Bd. of Aldermen, let contract to Merrill Engineering Co., Lamar Bldg., Jackson, Miss., at \$10,265, for 9500 sq. yd. rein. conc. paving, West Church St.; Peter A. O'Brien, Engr., with curb, gutter and conc. driveway on Jackson.

Miss., Aberdeen—City Mayor and Bd. of Aldermen, let contract to Barber Brothers Construction Co., Bogalusa, La., \$1.57 per cu. yd. for grading, draining, 8,875 sq. yd. rein. conc., paving, 6,385 lin. ft. conc. curb and gutter; C. N. Harrib Engineering Co., 705 Fourth and First National Bank Bldg., Nashville, Tenn. 6-12

Miss., Liberty—State Highway Dept., Jackson, reported, let contract to T. Carey, 4310 Eba St., New Orleans, La., at \$82,000, for 8.1 mi. grading, conditioning, Liberty-Barwick road, Amite County.

Oklahoma—State Highway Comsn., Oklahoma City, let contracts for 5 asphaltic road

oiling projects: Hughes County—2 sections, U. S. Highway No. 75, Nu-Tread Corporation, Oklahoma City; Bryan County—same contractor; Rogers County—oiling State Highway No. 20, east of Claremore, Roy Tanner Paving Co., Teeloma Bldg., Tulsa; Pittsburgh County—J. S. Turner, Durant. 6-19

S. C., Aiken—City let contract to Carolina Road Co., Greenville, S. C., at about \$6,500, for paving Hayne Ave., 20 ft. wide, with crushed rock, asphalt top, from Short St. to city limits.

S. C., Columbia—City, W. S. Tomlinson, Engr., let contract to Carolina Contracting Co., 1112½ Taylor St., Columbia, at \$69,810, for grading, paving, sidewalks, curbing and gutters on various streets. 6-19

Tennessee—Dept. of Highways and Public Works, Nashville, let contract for 5 roads and bridge: Cumberland-Roane Counties—8.773 mi. plain conc., State Highway No. 1, Ozone to Rockwood, John L. Humbard Construction Co., Quincy Ave., Knoxville, \$194,707; Fayette County—9.780 mi. grading, draining, Highway No. 57, Shelby County line to Moscow, S. K. Jones Construction Co., Cotton Exchange Bldg., Memphis, \$79,583; 11.589 mi. grading, draining, Highway No. 76, Moscow to Somerville, James Spencer & Son Construction Co., Royal Ave., Hot Springs, Ark., \$96,307; Hickman County—12.835 mi. grading, draining, Highway No. 100, Perry County line to point south of Centerville, J. B. Turner, 5030 Georgia Rd., Birmingham, Ala., \$167,887; Sheatham County—½ mi. conc., conc. and steel bridge and approaches over Sycamore Creek, Highway No. 49, between Ashland City and Pleasant View, Alexander Brothers & Hopson, Cadiz, Ky., \$40,660; T. E. McEwen, State Highway Engr. 6-6

Tenn., Johnson City—City Comsn., W. O. Dyer, Commr. of Streets, let contracts to Southeastern Paving & Construction Co., Johnson City, at \$15,000 for grading, paving, curbing and sewers, in seven districts, including Jay, Whitney, Lucas, Fall, Jackson and Pardee St.

Tenn., Lenoir City—City let contract to George Fisher Construction Co., at \$7,800, for paving and curbing ¾ blocks Grand St.

Tenn., Union City—Dept. of Highways and Public Works, R. H. Baker, Commr., Nashville, approved purchase of 44,000 bbl. cement from Marquette Cement Mfg. Co., U. & P. Bank Bldg., Memphis, for road work in Obion County; from Charles M. McCabe of 3500 bbl. cement for maintenance work.

Texas—State Highway Comsn., Austin, let contracts for 12 roads and 3 bridges, totaling \$1,801,426: LaSalle County—43.7 mi. rock asphalt, Highway No. 2, Webb County line to Frio County line, Trinity Farm Gravel Co., Record Crossing Rd., Dallas, \$506,409; Victori County—7.4 mi. grading, draining, Highway No. 29, C. T. Ingram, Cuero, \$38,762; Harris County—4.5 mi. grading, draining, Highway No. 19, T. L. James, Ruston, La., \$144,886; Brown County—12.9 mi. grading, draining, Highway No. 7, E. F. Buchy and C. T. Childs, Rising Star, \$114,172; Val Verde County—5.7 mi. grading, draining, Highway No. 3, L. J. Miles, 1809 Clover Lane, Fort Worth, \$116,286; Trinity County—9.7 mi. double bit. surface treatment, Highway No. 106, J. C. Kelley, Trinity \$96,777; Cameron County—11.4 mi. conc. Highway No. 100, R. W. Briggs, Pharr, \$244,873; Tarrant County—6 mi. conc., Highway No. 34, Philpot Construction Co., Houston, \$228,796; Cass County—8.8 mi. grading, draining, Highway No. 48, large structures, E. G. Powell, Jacksonville, \$85,372; small structures, Ed Pettus, Montgomery, La., \$29,060; San Jacinto County—7.7 mi. grading, draining, Highway No. 45, F. P. Jones, Jacksonville, \$69,884; Van Zandt County—1.6 mi. grading, draining, Highway No. 64, Hannah Construction Co., Box 9984, Waco, \$7814; Hudspeth County—14.2 mi. single bit. surface treatment, Highway No. 130, Haden & Austin, Post Dispatch Bldg., Houston, \$24,853; Navarro County—one bridge across Chambers Creek and 2 across Relief openings to Chambers Creek, Highway No. 31, J. B. Clardy, Fort Worth, \$91,508; Gibb Gilchrist, State Highway Engr. 6-5, 6-12

Texas—State Highway Comsn., Austin, let contracts for 9 roads, aggregating \$1,044,485; Henderson and Anderson Counties—7.1 mi. grading, draining, Highway No. 40, from near Poyner to Frankston, Lucas & Lucas, Cushing, \$126,801; Freestone County—3.8 mi. grading, draining, Highway No. 14, from Navarro county line to Limestone County line, Hannas Construction Co., Box 994, Wilco, \$21,250; Baylor County—9.6 mi. conc. Highway No. 24, from paving east of Seymour to Archer County line, Westmark Construction Co., McAlester, Okla., \$202,679; Archer County—6.9 mi. conc., Highway No. 24, from Baylor County V161; M z etaoiool

24, from Baylor County, line to Young County line; Young County, 5 mi. Highway No. 24, from Archer County line to Olney, Westark Construction Co., \$237,921; San Patricio County—9.9 mi. rock asphalt, Highway No. 128, from Angelita to Sinton, Cage Brothers, Bishop, \$137,642; Throckmorton County—13.5 mi. bit. macad., Highway No. 67A, Stephens County line to Highway No. 23, Trinity Farm Gravel Co., Record Crossing Rd., Dallas, \$160,502; Tyler County—12.1 mi. grading, draining, Highway No. 106, small structures, F. P. Jones, Lynch Bldg., Jacksonville, \$83,028; large structures, W. W. Vann, Mercedes, \$22,092; Austin County—7.5 mi. grading, draining, Highway No. 73A, F. W. Heldenfels, Rockport, \$52,300; Gibb Gilchrist, State Highway Engr. 6-5, 6-12

Tex., Beaumont—City, Paul H. Millard, Mgr., let contract to Uvalde Rock Asphalt Co., Frost National Bank Bldg., San Antonio, at about \$80,000, for paving streets in various sections of city; R. C. Black, City Engr.; lately noted rejected bids. 6-19

Tex., Hearne—City let contract to Thurber Construction Co. for 9 blocks paving in residential section. 5-29

Tex., Memphis—J. M. Shilling, Itasca, has contract to pave 3.087 mi. highway from Memphis to Lakeview via Mulberry Bridge, Hall County.

Tex., Port Arthur—City, J. W. O'Neal, Mayor, let contract to L. E. Kelley, 2900 12th St., Port Arthur, at \$5033 for 3080 lin. ft. curbing and 15,400 sq. yd. sidewalks in Lion's Bryan and Bluebonnet parks.

Tex., Selmour—State Highway Comsn., Austin, let contract to H. K. McCollum, 1517 Fort Worth Natl. Bank Bldg., Fort Worth, at \$183,571 for 11 mi. bit. surfacing, Highway No. 24, Baylor County; Gibb Gilchrist, State Highway Engr. 5-29

Va., Bristol—City, J. F. McCrary, Engr., let contract to Lee A. Gridley Construction Co., 300 W. Oklahoma Ave., Knoxville, Tenn., at \$64,555, for grading and conc. paving Solar, Moore, Cumberland, Mary and Russell St.; W. H. Fawcett, City Engr. 5-29

W. Va., Holidays Cove—City, Bd. of Control, let contract to W. H. Armstrong Co., Newton St., Fairmont, at \$34,000, for conc. surfacing 8 streets. 5-29

Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

Ark., Clarksville—City plans sewage disposal plant, septic tank, etc.; W. L. Winters, Engr., Merchants Bank Bldg., Fort Smith.

Ark., Judsonia—Town, C. A. Figley, Commr., will receive bids about July 20 for \$21,000 sewerage system; Ford & MacCrea, Engrs., Gazette Bldg., Little Rock. 6-26

D. C., Washington—Joseph P. Maher, 3108 K St., N. W., low bidder for service sewer Forty-fifth St. and Faraday Place, N. W.

Ga., Atlanta—Paul S. Etheridge, Chmn. Public Works Comsn., reported, petitioned Fulton County Comms. to increase water supply system to Peachtree Rd. section above Buckhead.

Ky., Louisville—Pittsburgh Foundation Co., Keystone Bldg., Pittsburgh, Pa., reported, low bidder at \$1,721,000 for southwestern outfall sewer from Cane Run Rd. to Ohio River. 6-15

Ky., Louisville—Comms. of Sewerage, Matt H. Crawford, Chmn., receives bids July 8 for Middle Fork trunk sewer, Section F, Contract No. 48. See Want Section—Bids Asked. 6-19

Louisiana—Cities of Gretna and Algiers, reported, plan co-ordinating sewage disposal plants; cost \$60,000; Charles Gelbke, Mayor, Gretna; T. Semmes Walmsley, Mayor, Algiers.

La., Houma—Municipal Engineering Co., Inc., Athletic Bldg., Dallas, Tex., installing storm sewers east side of Canal St.

Mo., St. Louis—Wm. Stoecker, Engr. in charge Overland District, reported, completed plans for sewer main trunk line, which will have separate sanitary and storm facilities, will be 16,372 ft. long, storm sewer, 6112 ft.; will require 40 mile pipe, 8-in. to 6 ft. in diam.; disposal plant to serve population of 20,000 will be erected at intersection of Wright Ave. and Cold Water Creek; cost \$875,000. 2-13

Okla., Oklahoma City—Reinhart & Donovan, Commerce Exchange Bldg., reported, has contract for sewer extension in Burnham, Alta Vista and Hays Sts.; Keller Construction Co., Tradesman Bldg., for sanitary sewer extension in Fairfax Addition.

Okla., Prague—City, L. Newhouse, Clk., receives bids July 7 for \$14,000 ft. of 8-in. vit. clay sewers.

Okla., Tulsa—Standard Paving Co., 2119 E. Eleventh St., reported, has contract at \$29,000 for storm sewer project, No. 9-C-30.

S. C., Greenville—City, having specifications prepared by Dan A. Hulick, City Engr., for sewers in three sections in southwest section of city; soon receive bids. 6-19

S. C., Greenville—City, A. C. Mann, Mayor, reported, receives bids July 22 for constructing sewer lines outside of city; Dan A. Hulick, City Engr., completing survey of plans and specifications.

Tenn., Johnson City—See Roads, Streets Paving.

Tex., Austin—W. G. Cullom, Allen Bldg., Dallas, has contract at \$18,576, for storm sewers San Jacinto St. from First to Second, East Ave., etc.

Tex., El Paso—J. B. McCrary Co., The Prnet. Bldg., Dallas, reported, has contract at \$90,000 for down town sewer system; contract let to Fairbanks, Morse & Co., Chicago, Ill., for installing pumping equipment.

Tex., Goose Creek—City, reported, planning drainage on Goose Creek St. to East Texas and Pine Gully; construct 5 switches.

Tex., Dalhart—See Roads, Streets, Paving.

Va., Orange—Town plans sewerage system and water lines to river, 10-in. and 8-in. pipe; also construct pump house and filter; \$150,000 bonds available; Ambler Engineering Co., Engrs., Richmond. 6-26

West Virginia—See Roads, Streets, Paving.

Street Railways

Tenn., Knoxville—State Railroad and Public Utilities Comsn., Nashville, approved franchise granted to Knoxville Power and Light Co., to extend Lonsdale St. Railway line from intersection of Tennessee Ave. and Johnson St. along Tennessee Ave. to its intersection with Sheridan St.

Telephone Systems

Fla., Miami—Isle of Dreams Broadcasting Co. plan expansion of plant facilities of WIOD; construct radio station on Collins Island; Russell T. Pancoast, Lincoln Rd., Miami Beach, Designing and Supvg. Archt.; addition will also be made to ground system of company; building will be of Spanish type architecture; steel and stucco with steel shutters, making it hurricane proof; will have conc. foundation for machinery; also plans improvements to studio in Miami and Miami Beach.

Ga., Lavonia—American Telephone & Telegraph Co., Atlanta, has plans by Richard W. Alger, Archt., 1310 Candler Bldg., Atlanta, for exchange building, 90x150 ft.; rein. conc., brick walls and stone trim.

Ga., Winder—American Telephone & Telegraph Co., Atlanta, has plans by Richard W. Alger, Archt., 1310 Candler Bldg., Atlanta, for exchange building; 1 story and basement; 90x50 ft., rein. conc.; brick walls; stone trim.

Ky., Stewartsville—Tri-County Telephone Co., incorporated; J. L. Powell, Obe Lester.

La., Mansfield—Southern Bell Telephone & Telegraph Co., Hurt Bldg., Atlanta, Ga., Frank Covert, Dist. Mgr., reported, soon let contract for telephone exchange building Gibbs St.

Okla., Enid—Southwestern Bell Telephone Co., Oklahoma City, A. G. Willis, Bldg. Engr., advises construction of office building postponed indefinitely. 6-19

N. C., Charlotte—Columbia Broadcasting System, Inc., 485 Madison Ave., New York, reported, acquired Station WBT.

Tex., Port Aransas—Port Telephone Co. incorporated; J. W. Hampton, James A. Harley; construct telephone lines at the port.

Virginia—Chesapeake & Potomac Telephone Co., Richmond, reported, expend \$402,500 for additions and improvements, including pole line and additional circuits Creighton Rd.; construct additional Richmond-Gloucester toll circuit.

Va., Martinsville—See Electric Light and Power.

Va., Richmond—Public Telephone Corp., American Natl. Bank Bldg., increased capital to \$50,000.

Textile Mills

Ala., Alabama City—Fiske-Carter Construction Co., Greenville, S. C., advises work on plant for Dwight Mfg. Co., consists of removing ropeway walls, fire walls, reflooring portion of engine room, putting in monitor skylight over engine room and addition of 1 elevator shaft; sub contracts let as follows: c. i. columns, Paul Wright & Co., Brown-Marx Bldg., Birmingham, Ala.; struc. steel, Virginia Bridge & Iron Co., 3900 Eighth Ave., North, Birmingham; roofing and sheet metal work, Interstate Roofing Co., Anniston. 6-28

N. C., Greensboro—Northwood Hosiery Co., 235 W. Wyoming Ave., Philadelphia, Pa., reported, removing part of full fashioned hosiery plant to Greensboro.

Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification.

Ark., Heber Springs—City, reported, rebuild pumping plant on Little Red River.

La., Natchitoches—City receives bids July 24 for addition to water and light plant and for finishing present building. See Want Section—Bids Asked.

Md., Baltimore—Jos. A. Lavezza & Son, 911 Eastern Ave., have contract at \$25,287 for clearing Prettyboy dam site (Parcel No. 1; R. M. Lee, Monkton, at \$91,470 for Parcel No. 2, 3, 4. 6-26

Miss., Gulfport—Hamilton Bros. Co., Gulfport, has contract for \$12,000 extension to water works system. 6-5

Miss., Hattiesburg—City receives bids July 17 for installing water plant on Boule River north of city; work includes 30 items and divisions for bidding, including installation low level pumping station, filter plant and reservoir, power plant, pumping equipment, filters, etc.; Thomas H. Allen, Consult. Engr., Memphis, Tenn.; Blakemore Drilling Co. has contract for well drilling. 5-8

Mo., St. Louis—Missouri Public Service Comsn., Jefferson City, reported, approved sale of controlling interests in St. Louis Water Co., to Commonwealth Utility Corp., Philadelphia.

N. C., Asheville—Wilson & Hewitt, Market St., has contract at \$35,000 for extension water works system; U. S. Pipe & Foundry Co., Birmingham, Ala., and Grinnel Co., 30 E. Fourth St., Charlotte, N. C., supply materials.

Tex., Pelly—Municipal Engineering Co., Athletic Bldg., Dallas, reported, has contract for \$81,000 water works system; plans extension of sewer. 5-22

Tex., Port Arthur—Gunite Concrete & Construction Co., 1301 Woodweather Rd., reported, has contract for relining city reservoir No. 1; W. O. Bowers, City Engr.

Tex., Yorktown—City install booster pump, capacity 500 gal. water per minute.

Woodworking Plants

N. C., Carthage—Wilson Furniture Mfg. Co., incorporated; W. G. Kirkman, High Point; J. V. Wilson, Carthage.

Tex., Houston—City Ready Cut House Co., 2509 Campbell St., increased capital \$80,000 to \$200,000; plans expending \$60,000 for buildings and machinery.

Va., Ferrum—Beckham-Hurt Furniture Co., incorporated; B. M. Beckham.

FIRE DAMAGE

Ala., Rockford—Rockford Hotel; office of Rockford Chronicle; Masonic Lodge Rooms; Ford Automobile Agency; Auto Part Supply House; \$30,000.

Ala., Winfield—Lumber plant of Winfield Heading Co.; loss \$20,000.

Ark., Heber Springs—City pumping plant on Little Red River.

Ga., Adrian—Pharmacy owned by Dr. B. C. Yates.

Ga., Sparta—Peden & Gaisert Lumber Co.'s dry kiln.

Ga., Thomasville—Store operated by Steve Watkins.

Ga., Statesboro—Brantley Johnson's residence, Inman St.

Ky., Lebanon—Store owned by Sam and Edward Lerman; loss \$50,000.

Ky., Louisville—Restaurant, 137 S. Fourth St.; Ross L. Gordon, Proprietor, 2339 Carolina Ave.; Woodruff Estate, care Louisville Trust Co., owner.

La., Eunice—Mill house of Eunice Band Mill Co.; loss \$75,000.

La., Franklin—J. M. Burgulieres Planting Co.'s sugar mill; loss \$500,000.

La., Pineville, Alexandria—Mercantile establishment of L. L. Brice; loss \$50,000.

Md., Belair—Vaughn's Hotel, Charles Vaughn, Proprietor.

Miss., Hazlehurst—H. J. Wilson's sawmill and lumber yards; loss \$10,000.

Mo., St. Louis—Building of National Furniture Co., 3406-10 N. Union Blvd.; loss \$35,000.

N. C., Hertford—Growers Peanut Co.'s plant; loss \$30,000.

N. C., Wilmington—Casey Lumber Co.'s plant at Rocky Point.

S. C., Laurens—Domestic Laundry & Dry Cleaning Co.'s plant on S. Harper St.

Tex., Orange—Western Union Telegraph Company's office; Ingram Cafe; Orange Dry Goods Co.

Tex., Sabine—John R. Adams general store, owned by J. P. Pierce; B. E. Graves' bakery shop, garage and residence; Robt. Castile's barber shop, owned by Cott Plummer Estate; loss \$25,000.

Va., Palmyra—Playhouse Theatre and 3-story dwelling, owned by Mrs. Vera V. Haden; merchandise store of W. A. S. Conrad; newspaper plant owned by R. L. Armfield; post office and merchandise store of E. W. Thomas.

W. Va., Beckley—Cunningham Bldg., Fayette St.; loss \$25,000.

BUILDING NEWS

BUILDINGS PROPOSED

Association and Fraternal

Mo., St. Charles—Lodge No. 690, B. P. O. E., remodel and erect addition to lodge bldg.; 3 stories and basement, brick, marble, terra cotta, rubble stone, steel and iron, asbestos shingle and tile roof; T. P. Barnett Co., Archt., Arcade Bldg., St. Louis; bids in.

Bank and Office

Ark., Fort Smith—City National Bank, 524 Garrison Ave., I. H. Nakdimen, Pres., soon take bids on bldg.; bank section 30x130 ft.; stores in remainder; Bassham & Wheeler, Archts., Kennedy Bldg. 12-5

D. C., Washington—American Red Cross erect \$600,000 office bldg., date of opening bids not determined; fireproof, 5 stories, 225x62 ft., cement, terrazzo and tile floors, conc. pile foundation; Trowbridge & Livingston, Archts., 527 Fifth Ave.; Welskopf & Pickworth, Engrs., 45 W. 45th St., both New York; bids will be advertised for and let under direction of Office of Public Buildings and Public Parks of National Capital, Col. U. S. Grant, 3rd, Director.

Ga., Atlanta—First National Bank, John K. Otley, Pres., remodel bldg., Peachtree St. and North Ave. for branch bank; rein. conc., brick and tile, stone trim, 2 stories and basement, 84x150 ft., built-up roof; Pringle & Smith, Archts., Norris Bldg.

Ga., Bedford—Citizens National Bank remodel building.

La., Shreveport—Commercial National Bank, Randle T. Moore, Chmn. of Bd., has postponed erection of 10-story addition to bldg., Market St. 3-13

Tenn., Memphis—Overton Estate, Wm. White Co., Agts., 25 S. Second St., having plans drawn by Harker & Cairns, Archts., Court Square Bldg., for additional story to bldg., Third St. and Union Ave., occupied by Memphis Builders Exchange. 6-19

Va., Norfolk—Virginia Electric & Power Co., 200 E. Plume St., R. J. Throckmorton, Vice-Pres., receives bids July 7 at office Calrow, Browne & FitzGibbon, Archts., Royster Bldg., for \$300,000 office bldg.; steel and rein. conc., brick and terra cotta exterior, 6 stories, 75x118 ft.; piling contract lately noted. 6-12

Churches

Ark., Fort Smith—Dodson Ave. M. E. Church, South, 1904 Dodson Ave., Rev. Geo. W. Pyles, Pastor, receives bids July 7 for \$60,000 auditorium; Haralson & Nelson, Archts., Merchants Bk. Bldg.; razing present structure. 5-29

Fla., Eustis—First Baptist Church erect first unit of bldg.; about ready to start work.

La., Columbia—Baptist Church erect \$15,000 brick bldg.; 76x46 ft.; Tudor & Ratcliff, Commercial Bank Bldg., Alexandria, probable contractors.

La., Monroe—First Baptist Church plans Sunday school and later auditorium.

N. C., Winston-Salem—Winston-Salem Greek Community, Chas. Cheros, Pres., Ansonia St., incorporated; plans to erect Greek Orthodox Church.

Okla., Oklahoma City—First Baptist Church, Ernest B. Mashburn, Chmn., Bldg. Comm., selected Walter T. Vahlberg, Braniff Bldg., as architect for \$100,000 Sunday school; fireproof, brick, 3 stories. 5-29

Tenn., Brownsville—Methodist Church erect brick bldg.; 1 story, misc. steel and iron, comp. built-up roof; Edwin B. Phillips, Archt., Fidelity Bk. Bldg., Memphis.

Tex., Brackettville—Protestant Episcopal Church plans parish house.

Tex., Houston—West End Methodist Church, Brunner Ave. and Floyd St., Ralph Walton, Chmn., Bldg. Comm., Citizens State Bank Bldg., erect brick veneer Sunday school; 2 stories and basement, 26x40 ft., comp. shingle roof, Sheetrock walls, Celotex ceiling, conc. foundation; Cornell G. Curtis, Archt., 1628 Hawthorne Ave.; receiving bids.

City and County

Ala., Florence—Lauderdale County Commrs. Court, H. L. Stutts, Probate Judge, rejected bids for new cell unit in jail; call for new bids later. 1-30

Fla., Jacksonville—City Council, Walter A. Stall, member, interested in establishment of public market.

La., Shreveport—Caddo Parish acquired site, Fairfield Ave., Cedar Grove, for juvenile home.

Miss., Morton—City Council and Ancient Free and Accepted Masons erect joint city hall and lodge bldg.; brick, 3 stories, 28x75 ft., steel and iron work, rein. conc. foundation, built-up comp. roof, plate glass windows, stores on first floor, city offices on second, lodge room on third; J. M. Spain, Archt., Merchants Bk. & Tr. Bldg., Jackson.

Mo., Linn Creek—Camden County, Leonard Franklin, Presiding Judge, Montreal, votes at Nov. election on new site for county seat; new courthouse planned. 2-27

Mo., Maplewood, St. Louis—City of Maplewood, Mercedes E. Schuster, City Clk., considers erecting city hall.

N. C., Roxboro—Person County Bd. of Commrs., R. P. Burns, member, plans to let contract in about 3 weeks for courthouse and jail; 2 stories and basement, white stone front, remainder light colored stone, lavatories in basement; courtroom and mezzanine seat about 500; about 24 jail cells; Chas. C. Hartmann, Archt., Jefferson Bldg., Greensboro. 6-14-28

Tenn., Memphis—Shelby County Comsn. having plans drawn by Harker & Cairns, Archts., Court Square Bldg., for workshop and garage at warehouse and penal farm. Mullins Station. 11-28

Tex., Runge—City, H. L. Reuser, City Sec., having plans drawn by Will N. Noonan Co., Builders Exchange Bldg., San Antonio, for \$10,000 city hall and fire station; brick, tile and stucco, 2 stories. 6-12

Va.-Tenn., Bristol—City Council remodel Bristol Public Library, Anderson St. and Woodlawn Ave.; Mrs. Ida V. Stone member of comm. to confer with architects.

Dwellings

Ark., Blytheville—J. A. Leech erect \$18,000 residence; brick veneer, 2 stories, 50x60 ft., tile floors, Indiana limestone, hot water heat, incinerator; Uzzell S. Branson, Archt., Farmers Bk. Bldg.; bids in.

Ark., Hot Springs National Park—Dr. J. S. Stell, Dugan-Stuart Bldg., erect \$10,000 Colonial residence; brick veneer, 2 stories, oak floors, tile bath, wood shingle roof; Elmer A. Stuck, Archt., Boyle Bldg., Little Rock; bids in.

Fla., Haines City—Wynn F. Scott erect \$50,000 residence, hollow tile and stucco, 2 stories; Maurice E. Kressley, Archt., Smith Bldg., Orlando.

Fla., Miami Beach—Raymond C. Penfield, care Archts., erect \$25,000 residence and garage, 5005 Apache Drive; rein. conc., conc. block and stucco, 85x52 ft.; Carlos B. Schoeppl, 528 Lincoln Rd., Miami Beach, and John & Coulton Skinner, French Village, LeJeune Rd., Coral Gables, architects.

Ga., Atlanta—Lindsey Hopkins, Healey Bldg., probably call for bids about July 3 for alterations to residence, Paces Ferry Rd.; Cooper & Cooper, Archts., Forsyth Bldg. 5-29

La., Slidell—J. Mossier erect 1-story residence; Weiss, Dreyfous & Seiferth, Archts., Maison Blanche Bldg., New Orleans.

Md., Baltimore—Raymond Heinz, 1908 Light St., erect residence, 3702 Copley Rd., Ashburton; Herbert C. Aiken, Archt., 2116 Maryland Ave.

Md., Baltimore—Clifton Building Co., 2635 Kirk Ave., erect 13 brick dwellings, 2600 block Kirk Ave.; 2 stories; \$39,000.

Md., Baltimore—Warren Black, iPer No. 2, Pratt St., erect \$10,000 frame residence, 329 Tunbridge Rd., Homeland; J. Withrop Wolcott, Archt., 324 N. Charles St.

Mo., St. Louis—Carl E. Mueller, 3220A Nebraska St., erect brick residence, Alexander Ave. near Haven St.; 1 story and basement, 27x53 ft.; Steinmeyer Bros., Archts., Intl. Life Bldg.; bids in.

Mo., St. Louis—Reymond S. Davis, care Klingensmith & Grover, Archts., 1217 Louderman Bldg., erect brick residence, Moorlands Park; 2 stories and basement, about 27x38 ft.; bids in.

Mo., Webster Groves, St. Louis—O. M. Chapman, 424 E. Big Bend Blvd., erect brick residence, Blackmer Place; 2 stories and basement, about 29x46 ft., tile bath, hardwood floors, comp. and slate roof; E. E. Christopher, Archt., Louderman Bldg.; bids in.

Okla., Oklahoma City—D. F. Crist erect residence; French Norman type, 1 and 2 stories, brick veneer.

Tenn., Memphis—Ben F. James, County Register, plans number dwellings, Rugby Hills sub-division.

Tenn., Memphis—E. N. Pierce, 110 Madison Ave., erect brick veneer residence; 1 story, hardwood floors, tile baths, comp. roof; plans complete.

Tenn., Memphis—F. L. Ingalls, Jr., 2258 Monroe Ave., erect English type brick veneer residence, Washington and Edgewood Sts.; 2 stories, hardwood floors, tile bath, comp. and tile roof; J. J. Broadwell, Archt., Sterick Bldg.; drawing plans.

Tenn., Millington—John Tally erect brick veneer residence; 1 story, 31x65 ft.; Polk W. Agee, Archt., Fidelity Bk. Bldg., Memphis.

Tex., San Antonio—Lewis Kayton, 320 Madison St., erect brick veneer residence, Elsmere and Howard Sts.; 2 stories, 2 baths; Richard Vander Straten, Archt., Travis Bldg.

Tex., Houston—D. P. Carlton, 2415 Smith Ave., erect Colonial residence, Inwood Drive, River Oaks; 2 stories, 7 rooms, 2 baths; J. W. Northrop, Jr., Archt., Kirby Bldg.; receiving bids.

Tex., Liberty—Immaculate Conception R. C. Church, Rev. M. I. Hurley, Pastor, erect 2-story brick parsonage.

Tex., Whitewright—Methodist Church erect brick veneer parsonage; John Tulloch, Archt., Sherman; bids in.

Government and State

Ga., Savannah—Following contractors estimating on extension and remodeling (except elevators) of post office and courthouse, bids July 14 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; J. A. Jones Construction Co., Commercial Bk. Bldg., Charlotte, N. C.; John M. Geary Co., P. O. Box 1258, Asheville, N. C.; Artley Co., 604 E. Bay St.; Olaf Otto, Arcade Bldg., both Savannah; Algernon Blair, First National Bank Bldg., Montgomery, Ala.; Yeager & Sons, Danville, Ill.; English Construction Co., Inc., 1311 H Ave., N. W., Washington, D. C.; National Construction Co., Inc., Glenn Bldg., Atlanta, Ga.; Virginia Engineering Co., First Natl. Bk., Newport News, Va.; Fleisher Engineering & Construction Co., Wrigley Bldg., Chicago, Ill.; Earl E. Garber Co., Inc., 203 W. Fourth St., Bethlehem, Pa.; J. M. Raymond Construction Co., Hildebrandt Bldg., Jacksonville, Fla.; Batson-Cook Co., West Point, Ga.; Samford Bros., 301 Washington Ave., Montgomery, Ala.; Ring Construction Co., Wesley Bldg., Minneapolis, Minn.; Chas. Weitz Sons, Des Moines, Iowa; Murch Bros. Construction Co., Ry. Exch. Bldg., St. Louis, Mo. 6-19

La., Bogalusa—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., receives bids until July 18 for brick and stone trim post office; \$130,000; plans from office Supvg. Archt.

Md., Hagerstown—State Bd. of Welfare, Stuart S. Janney, Chmn., Baltimore, will purchase 741-acre tract near Hagerstown for prison; architect not selected. 5-22

Miss., Jackson—State, Gov. Theo. G. Bilbo, Chmn., New Capital Improvement Comsn., receives bids until July 17 for repairs and alterations to Governor's offices; plans from Vinson B. Smith, Jr., Archt., National Bk. of Gulfport Bldg., Gulfport, and on file at office of Governor. 5-29

Miss., Laurel—Mayor and Bd. of Commrs. receive bids until July 7 for stadium construction; L. W. Duffee, Archt.-Engr., O'Fallon Bldg.; also bids same date for drainage ditches and embankment work on race tract, South Mississippi Fair.

Okla., Fort Sill, Lawton—Constructing Quartermaster, Fort Sill, has low bid at \$19,269 from McMillen & Shelton, Enid, for dry cleaning plant addition to laundry. 3-20

Tenn., Kingsport—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids July 25 for post office; drawings from office Supvg. Archt. 6-5

Tenn., Johnson City—Congress passed bill providing \$650,000 for addition to Soldiers' Home.

Va., Roanoke—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., plans to call for bids bet. July 15 and Aug. 1 for post office, Commerce and Church Sts.; granite base, brick and stone above; 195x121 ft., 32,910 sq. ft. ground area, 3 stories and basement; \$525,000 available. 5-22

Va., Richmond—Following contractors estimating on \$900,000 extension and remodeling (except elevators and elevator hatchway entrances) of post office, custom house and court house, bids July 7 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; R. P. Farnsworth & Co., Inc., Maritime Bldg., New Orleans, La.; Chas. Weitz Sons, 713 Mulberry St., Des Moines, Iowa; North-Eastern Construction Co., Nisnon Bldg., Winston-Salem, N. C.; W. P. Thurston Co., Inc., 301 S. 4th St., Richmond; DeVault & Deitrick, Inc., Massillon Rd., Canton, O.; Algernon Blair, First National Bank Bldg., Montgomery, Ala.; Murch Bros. Construction Co., Ry. Exch. Bldg.; Wm. MacDonald Construction Co., Synd. Tr. Bldg., both St. Louis, Mo.; Jones Construction Co., Commercial Bk. Bldg., W. E. Rowan, Builders Bldg., both Charlotte, N. C.; Fralnie Bros. & Haigley, 19 W. Franklin St., Baltimore, Md.; Virginia Engineering Co., Inc., First Natl. Bk. Bldg., Newport News, Va.; Van Asdlen Construction Co., Inc., 1600 Arch St.; Ralph S. Herzog, 10 S. Tenth St., both Philadelphia, Pa.; Jos. Gelenter, Inc., 98 Willoughby St., Brooklyn, N. Y.; Fleisher Engineering & Construction Co., Wrigley Bldg., Chicago, Ill. 6-26

W. Va., Morgantown—National Guard, Lt. Col. C. C. Robinson, advises will not start work on armory before September; \$35,000 to \$40,000, steel, brick and block, 1 and 2 stories, 85x120 ft., conc. foundation. 6-26

La., New Orleans—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid at \$1,178,000 from R. P. Farnsworth & Co., New Orleans, for U. S. Marine Hospital; low bid for elevator plant from Shepard Elevator Co., 2425 Colerain Rd., Cincinnati, O., at \$23,255. 6-5

Md., Clayton, St. Louis—St. Louis County, Walter E. Miller, Clk., receives bids July 1 for metal weatherstrips and plastic caulking for \$1,000,000 St. Louis County General Hospital; Aegerter & Bailey, Archts., Ry. Exch. Bldg.; Taxis & Becker, Const. Engrs., Chemical Bldg.; E. P. Bradley, Mech. Engr., 4200 Forest Park Blvd.; Hall-Mackay Construction Co., Contr., 625 Locust St., all St. Louis. 2-13

Md., La Plata—Dr. Donald St. C. Campbell, Deputy State Health Officer, interested in erection of \$50,000 hospital to serve Charles County.

Miss., Jackson—Mississippi Hospital Removal, Improvement and Lake Sale Comsn., Mrs. John Clark, Sec., De Kalb, are starting work with convicts, preliminary to construction of remaining 30 bldgs. for \$4,500,000 Mississippi Insane Hospital, Rankin County; 20 bldgs. completed. 5-1

Miss., Laurel—Chamber of Commerce and physicians interested in purchase and remodeling of Laurel General Hospital.

N. C., Charlotte—Good Samaritan Hospital has offer of \$45,000 from Duke Foundation provided \$15,000 is raised; would remodel hospital and erect 2-story brick nurses' home; install elevator in hospital; X-ray room.

Okla., Shawnee—Shawnee Indian Sanatorium, Dr. David W. Illick, in charge, erect \$75,000 infirmary.

Tex., Abilene—State Bd. of Control, Austin, receives bids until July 7 for 2-story fireproof women's dormitory, Abilene State Hospital; separate bids for plumbing, heating and elect. work; plans from David S. Castle Co., Archt.-Engr.

Tex., Beeville—Dr. S. E. McNeill and Dr. H. E. Lancaster erect 2-story brick veneer hospital; W. C. Stephenson, Archt.

Tex., Galveston—State Bd. of Control, Austin, Claude D. Teers, Chmn., rejected bids for \$150,000 psychopathic hospital; will call for new bids; 4 stories, rein. conc., brick and stone, about 135x45 ft., pile foundation; Wyatt C. Hedrick, Inc., Archt., First Natl. Bank Bldg., Fort Worth. 6-5

Tex., Waco—Federal Board of Hospitalization recommended Waco as location of \$1,200,000 U. S. Veterans Hospital for neuropsychiatrics. Address U. S. Veterans Bureau, Arlington Bldg., Washington, D. C. 1-2

Va., Marion—Southwestern State Hospital placing material on ground for 100-room addition; 3 stories and basement, brick and stone; porches; occupational therapy dept. in basement; 2 operating rooms, X-ray dept., etc.; about \$100,000.

Va., Norfolk—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., receives bids July 22 for additional toilet rooms, nurses' quarters, U. S. Marine Hospital.

Va., Richmond—Virginia Home for Incurables has plans completed by Baskerville & Lambert, Central National Bank Bldg., for 7-story bldg., Powhatan and Appomattox Sts.; fireproof, brick, 199x80 ft., porch 106 ft. long, sun parlors on each floor, running water in each room; accommodate 100; 2-story servants' quarters. 10-3

Va., Richmond—Stuart Circle Hospital, Dr. Chas. R. Robins, Pres., soon have plans ready for bids for \$100,000 nurses' home; gray brick, 3 stories, U shape; Chas. M. Robinson, Inc., Archt., Times Dispatch Bldg. 4-3

Hotels and Apartments

Fla., Brighton—Brighton Valley Hotel, Arch Updike, Gen. Mgr., plans building.

Fla., Leesburg—Harry Balfour, Silver Lake, plans \$60,000 building.

Fla., Miami Beach—Mrs. Virginia W. Hanks, care Bryan C. Hanks, Florida Power & Light Co., Miami, has permit for \$12,000, 4-unit apartment, S. W. corner 9th St. and Michigan Ave., conc. block and stucco; Carlos B. Shoepl, 528 Lincoln Rd., and John & Coulton Skinner, Archts., LeJeune Rd., French Village, Coral Gables; Jesse P. Montz, Contr., 4349 Sheridan Ave., Miami Beach.

Ga., Dalton—H. J. Smith has low bid from Barrett Construction Co. for 1-story, 28-room addition and improvements to 4-story, brick Hotel Dalton; \$35,000; comp. roof, tile and hardwood floors; A. Ten Eyck Brown, Archt., and A. Barilli, Jr., Asso. Archt., both Forsyth Bldg., Atlanta. 6-19

Ga., Madison—John F. Carey, Engr., interested in erecting 40-room hotel; brick, millwork, steam heat. See Want Section—Building Material and Equipment.

La., New Orleans—United Hotels of the South and West, Inc., Frank J. Dean, V. P., 1030 W. 55th St., Kansas City, Mo., expanding \$340,000 for improvements to the Roosevelt Hotel, 123 Baronne St., Franklin Moore, Mgr.; repainting, redecorating, paneling, new draperies and curtains, install 247 new bathrooms; plumbing contract to Gore and Daubert, Inc., 835 Baronne St.

La., Shreveport—Washington-Yorsee Hotel has low bid at about \$18,000 from K. C. Wilson, Slattery Bldg., for alterations and repairs.

La., Winnfield—Breedlove Hotel Co., J. M. Breedlove, Pres., having plans prepared by F. W. Steinman & Son, San Jacinto Life Bldg., Beaumont, Tex., for \$65,000, 4-story, brick and conc. hotel.

Miss., Greenville—A. H. Alvis and Associates, Walthall Hotel, Jackson, receive bids about July 20 for \$250,000, 6-story, 100-room, fireproof hotel; 88x100 ft., built-up roof, terrazzo floors; pile foundation to carry 4 additional stories; rein. conc., steel, brick and stone trim; lobby, shops, and dining room on ground floor, convention rooms on second floor; two electric passenger elevators, one freight elevator and dumbwaiter; Frank P. Gates Co., Archts.-Engrs., Edwards Hotel Bldg., Jackson. 6-26

Mo., Springfield—Eugene F. Johnson, McDaniel Bldg., Archt., and W. W. Johnson, Contr., 301 College St., interested in construction of chain of hotels in Ozark region of Southwest Missouri and North Arkansas; each unit to cost about \$30,000.

Okl., Bartlesville—C. F. Burlingame, Bartlesville, and Frank Maire, Lima, Ohio, add two stories and roof garden to Maire Hotel; \$175,000; provide 40 extra rooms.

Tenn., Knoxville—B. H. Sprinkle, 422 W. Union Ave., to add 4 stories to 3-story apartment, now nearing completion on site of former Arcade Bldg., Union Ave.; F. A. Hubbell, Supvg. Engr.

W. Va., Montgomery—C. H. Martin has low bid from George Stoglin, Charleston, at about \$30,000 for 7-family apartment, attached dwelling plan; each apartment 6 rooms; 10 garages; V. C. Pettit, Archt., Kanawha Bk. & Tr. Bldg., Charleston.

Miscellaneous

Fla., Palatka—National Home for Disabled Volunteer Soldiers, General George H. Wood, Pres., Dayton, Ohio, may erect \$2,000,000 home in Palatka, or some other Southern location.

Fla., Tallahassee—Shell Point Properties, E. C. Roberts, 811 W. Jefferson St., plan clubhouse.

La., New Orleans—Home of Incurables, 612 Henry Clay Ave., has low bid from J. A. Petty & Sons, Inc., Godchaux Bldg., for improvements, including conc. foundations, comp. roof, terrazzo floors, tile walls, asphalt tile floor; Diboll & Owen, Archts., Canal Bk Bldg.

La., Shreveport—Cosmopolitan Club plans clubhouse on Cross Lake; main building, 40x60 ft.

Miss., Greenwood—Greenville Country Club, William Wynne, receives bids July 5 for \$13,000 clubhouse to replace burned structure; James J. Broadwell, Archt., Sterick Bldg., Memphis.

N. C., Highlands—Highlands Museum, Clark Foreman, contemplate establishing museum and biological laboratory.

Tex., Georgetown—W. W. Edwards started work on race track and fair grounds; buildings include grandstand, exhibition hall, stables for race track and show stock; two tracks, one-half and seven-eighths miles long, respectively.

Va., Richmond—Right Rev. A. J. Brennan, Bishop of Catholic Diocese of Virginia, immediately place plans in hands of contractors for estimates for \$1,000,000 St. Joseph's Orphanage at Hollybrook; 13 buildings in group to cover 40 acres; includes dormitories, central chapel, school and administration buildings, gymnasium, priest's house, Romanesque architectural design; exterior of buff colored brick and terra cotta, stone trim, green tile roof; fireproof; Carneal, Johnston & Wright, Archts., Electric Bldg. 5-29

Railway Stations, Sheds, Etc.

Okl., Oklahoma City—St. Louis-San Francisco Ry. Co., F. G. Jonah, Ch. Engr., St.

Louis, and Chicago, Rock Island & Pacific Ry. Co., C. A. Morse, Ch. Engr., Chicago, have low bid from Tankersley Construction Co., Cotton-Grain Exchange Bldg., Oklahoma City, for \$2,500,000 union station; 360x222 ft., Bedford limestone, Moorish design; two platforms 1300 ft. and one 1000 ft. to be back of station and covered with sheds. 6-19

Schools

D. C., Washington—District Commrs., Room 509 District Bldg., receive bids July 15 for erection of Alice Deal Junior High School, Davenport St., between Howard St. and Emory Place; cubical contents, 1,527,000 cubic feet; apply Room 427 District Bldg.

Fla., Chiefland—Additional contractors estimating on \$50,000 school, bids received July 8; Scarborough & Miller, Leesburg; George C. Carr, Kissimmee; A. H. Harvey, Box 594, Gainesville; T. K. Appar, Box 5224, Daytona Beach; 1 story and basement, 300x53x68 ft., brick walls, steel, steel sash, 17 classrooms, auditorium; Alvin R. Moore, Archt., 300 1/2 S. Monroe St., Tallahassee; H. S. Priest, Supt., Levy County Bd. of Education, Bronson. 6-26

Fla., Haines City—National Christian Efficiency Assembly open bids about July 15 for \$100,000 religious convention building; 200x220 ft., one story and balcony, cement-tile floors, metal roof, conc. foundation; equipment to cost \$30,000; Arthur Beck, Archt., 18 Autrey Arcade, Orlando; building is first unit of 3-year program to embrace auditorium with 7800 capacity; four unit college; administration building; two 400 capacity dormitories; cafeteria; 12 faculty residences; 250 cottages; probably 800 room hotel; property comprises 320 acres with 9-hole golf course. 6-26

Fla., Melrose—Bd. of Education receives bids July 7 for 1-story, brick, tile and stucco school; W. D. Willis, Archt., Pensacola; Grahm Construction Co., Red Rock Bldg., Atlanta, Ga., bidding.

Fla., St. Augustine—State Board of Control, P. K. Yonge, Chmn., receives bids July 14 at Hotel White House, Gainesville, for addition to central heating plant, Florida School for the Deaf and the Blind; plans from Rudolph Weaver, Archt., 204 Peabody Hall, Gainesville.

Fla., Tampa—Hillsborough County School Board receives bids July 10 for work at 3 schools, to cost \$12,500; installation of rain-water system at Hillsborough School, B. M. Sullivan, Civil Engr.; 2-classroom addition to Palm River School; M. Leo Elliott, Inc., Archt., 706 Franklin St.; new roof on Robert E. Lee School.

Ga., Augusta—Bd. of Trustees of Paine College, E. C. Peters, Pres., recondition and repair all buildings.

Ga., Cuthbert—Andrew College plans remodeling building for classrooms and administration purposes; brick veneer, comp. roof.

Ga., Quitman—Bd. of Education, J. Harold Saxon, Supt., has low bid at \$39,000 from J. M. Culpepper & Son, Pelman, Ga., for school; 1 story and basement, 288x53 and 65x79 ft., brick, struc. steel, comp. and tile roof, conc. footings; Lloyd Greer, Archt., Valdosta. 6-19

Ky., Georgetown—Georgetown College soon let contract for installation of heating plant.

Ky., Louisville—Bd. of Education, Samuel D. Jones, Business Director, received low bid of \$429,000 from Rommel Brothers, 919 E. Broadway, for Crescent Hill Junior High School, Grinstead Drive, between Peterson and Galt Aves.; J. Meyrick Colley, Archt., 1411 Dove Rd.; Warren & Ronald, Heating and Ventilating Engrs., Heyburn Bldg. 6-5

Ky., Paducah—School Board take bids until July 8 on George Rogers Clark school; 1 story and basement, L-shaped, 164x197x116 ft., brick, 8 classrooms and toilets; conc. foundation, asphalt shingle roof; heating, plumbing and electric wiring under separate contracts; S. Lester Daly, Archt., Paducah.

Ky., Owensboro—Davies County Bd. of Education, J. W. Snyder, Supt., erect \$20,000, 1-story, 205x87 ft., hollow tile and brick school near Sutherland, 7 miles from Owensboro; hardwood floors, built-up roof; C. W. Kimberlin, Archt.-Engr., 1001 Frederica St.; bids in. 6-26

La., Forest—Following contractors estimating on 6-room addition and improvements to brick high school, bids July 8 by West Carroll Parish High School Bd., Oak Grove; W. H. Blane; W. C. Salley, Ouachita Bank Bldg., both Monroe; Tudor & Ratcliff, Commercial Bank Bldg., Alexandria; W. T. Simpson, West Monroe; Albert G. Simms, Ringgold; J. A. Petty & Sons, Inc., Godchaux Bldg., Baton Rouge; The Clarence W. King, Archts., Giddens-Lane Bldg., Shreveport, and Bernhard Bldg., Monroe. 6-19

La., Lake Charles—LaSalle Christian Brothers have plans completed in few days by Wm. R. Burk, Balter Bldg., New Orleans, for \$35,000 gymnasium and auditorium building on Campus on Landry Memorial High School; 90x120 ft., second floor to have 4 classrooms, rein. conc. foundation, tile and comp. roof, plastered interior, steel trusses. 6-19

La., New Orleans—Contractors estimating on extensions and alterations at Robert E. Lee School, Carrollton Ave., and Birch St., for which are received until July 9, are: Chas. Gibert, J. M. deFraithe, both Canal Bank Bldg.; L. J. Woodworth, Hibernia Bldg.; J. A. Petty & Sons, Godchaux Bldg.; Geary-Oakes Co., Inc., Queen & Crescent Bldg.; Gervais Favrot, M. A. Palfelt, both Balter Bldg.; Lionel Favrot, John O'Brien, both Louisiana Bldg.; J. V. & R. T. Burkes, Inc., American Bank Bldg.; J. A. Haase, 916 Union St.; E. W. Bond & Bros., 816 Howard Ave.; O. M. Owin Construction Co., 3105 Fern St.; A. Garrett, Maritime Bldg., all New Orleans; \$75,000; 167x57 ft.; 8 classrooms, cafeteria, boiler room and toilet; rein. conc. foundation, slate roof, pressed brick exterior, plastered interior, steel and iron; E. C. Christy, Acting Supvg. Archt., City Hall Annex. 6-26

La., New Orleans—Dillard University, Edgar B. Stern, Pres. of Bd. of Trustees, has ordinance before City Council requesting permission to build educational plant on the Rose Hill tract, Gentilly Rd. near London Ave.; \$2,000,000. 3-20

Md., Baltimore—Bd. of Awards, City Hall, receives bids, in duplicate, July 9 for alterations and additions to heating system in School No. 1, and for heating, plumbing systems in School No. 121; Joshua R. Jolly, Act. Sec.; either of above may be obtained at office Bd. of School Commrs.; specifications for Chief of Maintenance and Operation of School Bldgs., 1230 E. 20th St. 6-12

Md., Baltimore—Public Improvement Comsn., Bureau of Construction, Room 324 City Hall, H. J. Leimbach, Supvg. Engr., receives bids until July 9 for addition to Gardenville School, Belair Rd. between Franklin and Echodale Aves. 6-12

Md., Baltimore—Public Improvement Comsn., H. J. Leimbach, Supvg. Engr., received low bid, \$161,700, from P. C. Street Engineering Co., Brehms Lane and Kentucky Ave., for addition and alterations to Govans Elementary School, Campbells Lane and Govans Ave.; O. Eugene Adams, Archt., 329 N. Charles St. 6-12

Md., Laurel—District Commrs., Room 427 District Bldg., Washington, D. C., receive bids until July 7 for extending steam and return lines and water and sewer lines to the Employees' Building at the District Training School, near Laurel. 3-27

Md., Lock Raven—Maryland Training School for Boys has low bid from Davis Construction Co., 9 W. Chase St., Baltimore, for educational and vocational building; cost about \$175,000; 133x192 ft., 2 stories, tile and stucco.

Miss., Ellisville—Ellisville State School, Dr. H. H. Ramsay, Supt., receives bids July 11 for furnishing and installing Diesel engine-driven electric power generating plant.

Miss., Ellisville—Jones County Agricultural High School and College Bd. of Trustees has low bid at \$20,650 from Bradley Brothers Construction Co., Laurel, for 2-story, brick high school; L. W. Duffee, Archt., O'Ferrell Bldg., Laurel. 6-26

Miss., Escatawpa—Bd. of Trustees, Escatawpa Consolidated School, W. C. Oliver, Sec., receives bids July 9 for drilling artesian well for school; for the plumbing required, lavatory, paving, 45 sq. yds.; for painting 70 squares of interior, and for about 200 auditorium seats.

Miss., Hattiesburg—Mississippi State Building Comsn., W. C. Trotter, Sec., Jackson, remodel 7 college buildings; Vinson B. Smith, Archt., Gulfport; bids in.

Miss., Jackson—Mississippi Building Comsn., W. C. Trotter, Sec., probably receive bids Aug. 25 for \$50,000 building and repairs at Deaf and Dumb School; 2 stories, conc. and brick, fireproof; plans in progress by Frank P. Gates Co., Archts.-Engrs., Edwards Hotel. 6-26

Mo., Jefferson City—Lincoln University selected Wm. B. Ittner, Inc., 3615 Olive St., St. Louis, to prepare plans for home economics buildings; \$50,000. 6-26

Mo., Piedmont—Bd. of Education rejected bids on \$10,000 gymnasium, take new bids or revise; brick, 1 story and basement, 60x100 ft.; Reither & Lindsay, 424 H. and H. Bldg., Cape Girardeau.

N. C., Asheville—Buncombe County Bd. of Education, A. C. Reynolds, Supt., plans 8-room grammar school in Enka District, and 2-room and cafeteria addition to Sand Hill School; brick veneer, comp. roof; \$50,000; preliminary plans in progress by W. J. East, County Archt., Asheville. 4-17

N. C., Chapel Hill—University of North Carolina, Henry W. Chase, Pres., erect \$100,000 carillon tower, gift of John M. Morehead and Rufus L. Patterson. 5

N. C., Raleigh—Catholic Church, Bishop William J. Hafey, plans \$30,000, negro school, Tarboro St., brick, 1 story; probably erect by day labor.

N. C., Raleigh—Negro Deaf and Dumb School probably erect school, Buffalo Farm, Garner Rd.

Okla., Goodwell—State Building Comm., H. B. Cordell, Chmn., Oklahoma City, having plans prepared by Layton, Hicks & Forsythe, Archts., Braniff Bldg., Oklahoma City, for \$15,000 Mechanical building, bids to close July 8, brick and conc., 1 story.

Okla., Crescent—Bd. of Education, Roy Holliday, Clk., soon have plans ready by P. H. Weathers, Oil Exchange Bldg., Oklahoma City, for \$25,000, brick, stone and conc. school. 6-5

Okla., Greenfield—Consolidated School District, Will Barnett, Clk., has final plans in progress by The Huseman Co., Archt., Chickasha, for \$30,000 school; 1 story, 6 rooms, brick, and stone.

Okla., Muskogee—Bd. of Education, John W. Porter, Pres., receives bids about July 1 for additions to Whittier, West High and Longfellow schools; L. L. Howenstein, Archt., Manhattan Bldg. 5-1

Okla., Ponca City—Bd. of Education, Jessie Esco, Clk., take bids until July 7 on additions to Lincoln and McKinley grade schools; each to be brick, 1 story, 38x50 ft., \$20,000; Smith & Senter, Archts., Philtower Bldg., Tulsa.

Okla., Vinson—Bd. of Education, J. A. Halcombe, Clk., have plans ready next month by the Butler Co., Archts., Insurance Bldg., Oklahoma City, for \$20,000 school; 1 story, brick, 52x80 ft.

S. C., Cayce—Brookland-Cayce School District voted \$100,000 bonds for high school; R. H. Fulmer, Member, Bd. of Trustees.

S. C., Travellers Rest—Bd. of School Trustees, C. L. Eddy, immediately begin constructing \$18,500 grammar school. 3-13

S. C., Winnsboro—School Bd., R. White Turner, Chmn., erect 4-classroom, brick and stucco, Everett School; A. D. Gilchrist, Archt., Rock Hill; day labor; owner ready for material.

Tenn., Chattanooga—City may vote Aug. 7 on \$600,000 bonds for school improvements.

Tenn., Nashville—Bd. of Education erect junior high school in North Nashville; \$150,000 bonds voted. 3-20

Tenn., Nashville—Davidson County Bd. of Education, W. C. Dodson, Supt., probably open bids July 2 for high school, Gallatin Rd. and at Old Hickory; brick and stone; Geo. D. Waller, Independent Life Bldg., Archt. for former. 5-8

Tenn., Old Hickory—See Nashville.

Tex., Austin—R. W. Chapline, 1701 Guadalupe St., receives bids July 7 for 1-story, 96x54 ft., brick store, 17th and Guadalupe Sts.; cement and wood floors, comp. roof; Roy L. Thomas, Archt., Littlefield Bldg.; plumbing and wiring by owner.

Tex., Canadian—City voted \$10,000 to remodel and equip school; let contract immediately.

Tex., Fredericksburg—City voted \$50,000 bonds for new schools.

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., has low bid at \$33,000 from W. H. Wolter, 1907 E. Commerce St., for 6-room addition to Mark Twain Jr. High School; brick and rein. conc.; Leo. M. J. Dielmann, Archt., 306 E. Commerce St.; Phelps & Dewees, Archts., Gunter Bldg.

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., has low bid at \$29,703 from R. C. Shane, 1026 N. Alamo St., for repairs and additions to 8 schools; brick, tile, rein. conc.; wood floors; Phelps & Dewees, School Archts., Gunter Bldg. 6-12

Tex., San Antonio—School Board, Dr. J. A. McIntosh, Pres., purchased site, Pine St. and Piedmont Ave.; plans elementary school and later a junior high school.

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., have plans complete about July 25 for \$1,000,000, 2000-student

capacity senior high school, Spanish Acres; Spanish design, 2 and 3 stories, white cement exterior on masonry walls, cast stone trim, Spanish tile roof; glazed dome; administration offices, commercial and domestic science departments, classrooms; Phelps & Dewees, Gunter Bldg., School Archts.; Adams & Adams, Real Estate Bldg., Archts.; W. E. Simpson Co., Milam Bldg., Engrs. 5-1

Tex., Waller—Waller Rural School Dist. No. 2, Dr. H. A. Berry, Pres., plans \$30,000 school; C. G. Curtis, Archt., 1628 Hawthorne St., Houston.

Va., Richmond—Medical College of Virginia, Dr. W. T. Sanger, plans \$125,000 library, 12th and Clay Sts.; expect to build about first of year; Baskerville & Lambert, Archts., Central Natl. Bk. Bldg. 6-26

Va., University—Board of Visitors, University of Virginia, Dr. Edwin A. Alderman, Pres., authorized construction to cost \$700,000, including a \$400,000 law building, a \$200,000 nurses home, and a \$100,000 wing to the Cobb Chemical Laboratory. 4-24

W. Va., Cowen—Glade District Bd. of Education to let contract July 8 for school; plans by E. C. Holmboe, Archt., Empire Bldg., Clarksburg.

Stores

Ark., Beebe—Dr. W. H. Abington plans store building, Front St.; brick, 25x60 ft., 1 story, comp. roof; private plans.

Ark., Fort Smith—W. E. Stuart, 3703 Johnson St., plans frame store, Midland Heights addition.

Ark., Little Rock—Keith Estate let contract to Matt M. Bush, Exch. Bk. Bldg., for remodeling Woolworth Store, 400-02 Main St., recently damaged by fire; \$20,000.

Ga., Atlanta—Maler-Berkele-Gorham Co., 111 Peachtree St., N. E., soon let subcontracts for alterations to jewelry store; fixtures; Mr. Haygood to direct work.

La., Lake Charles—Berdon-Campbell Furniture Store receives bids July 5 for 2-story, and mezzanine, 80x137-ft. rein. conc., brick and terra cotta trim furniture store; Asmus, Clark & McCook, Archts.

La., New Orleans—L. Feibleman & Co., Inc., David L. Cohn, V.-P. and Gen. Mgr., Baronne and Common Sts., effected affiliation with Sears-Roebuck & Co., Chicago; Mr. Cohn will become President of affiliated store; Max and Leopold Feibleman will retire from active interest; plans brick, granite and steel building at present location.

N. C., Lexington—Dr. W. J. Vestal received low bid from Thomason and Ward for store and office building, Main St.; 2 stories, 50x140 ft., 1 and 7-stories; main store to be

occupied by the Belk-Stevens Co.; J. J. Sawyer, Archt., Jefferson Bldg., Greensboro. 5-22

Okla., Oklahoma City—W. H. Stout, 2009 W. 19th St., receives bids July 25 for \$35,000 store; brick, stone, steel, rein. conc.; 2 stories, 50x130 ft.; private plans.

Okla., Tulsa—C. B. Harter, manager of Welders Supply Co., 315-17 E. Third St., has plans drawn for 311-13 E. Third St.; 2 stories, 50x90 ft., brick.

S. C., Rock Hill—A. D. Gilchrist, Archt., receives bids not later than July 12 for 2-story and basement, 64x129 ft., steel frame, brick store on Main St. for Belk Brothers, Charlotte, N. C.; tar and gravel roof; elevator to be purchased by owner. 6-12

Tenn., Memphis—John Kimbrough, Exchange Bldg., erect building, Union Ave. and Willet St., to be leased to Arthur Seelbinder Drapery & Furniture Co., 265 S. Cleveland St.; \$30,000; 1 and 2 stories, brick, 38x40 ft.; H. M. Burnham, Archt., Goodwyn Institute Bldg.

Tex., Palestine—J. C. Penney Co., 330 W. 34th St., New York, F. M. Butler, local mgr., C. G. Shaw, Construction Dept., probably let contract to Lorbandt Construction Co., Dallas, to remodel store; new window display space, merchandising balcony, new fixtures, new lighting system.

Va., Suffolk—C. F. McKay, McKay-Washington Co., Inc., plans enlarging store, N. Main St.; brick addition, 55x50 ft.

Theatres

Ga., Columbus—Publix Theatres Corp., 57 Ellis St., N. E., Atlanta, Milton H. Kress, Local Mgr., Grand Theatre, remodel theater; \$50,000; increase seating capacity 900, new decorations, marquees, enlarge foyer, new chairs, heating and ventilating systems; work to be in charge of Arthur Jones, Publix Engr.

Warehouses

N. C., Asheville—T. C. Smith, 14 Lexington Ave., has low bid at \$26,411 from Geo. Howe Wilson, Hall St., 2-story, brick, struc. steel, warehouse and sales building on Battery Park Ave. to be leased to Crane Co., 836 S. Michigan Ave., Chicago; Henry Irvan Gaines, Archt., Public Service Bldg., Asheville. 5-8

Tex., Austin—Becker Lumber Co., 87 Congress St., has plans nearing completion by Edwin C. Kreisler, Scarborough Bldg., for 1-story, 40x150 ft., brick warehouse; conc. foundation, cement floors, built-up roof.

Tex., Yoakum—State Highway Dept., Austin, plan \$14,000 warehouse.

BUILDING CONTRACTS AWARDED

Association and Fraternal

Md., Baltimore—Ingalls Stone Co., Bedford, Ind., has limestone contract for \$1,000,000 Scottish Rite temple; cement, Hudson Building Supply Co., 1800 Whitmore Ave., King Coal & Supply Co., 627 Aisquith St., and Pen-Mar Co., Inc., Munsey Bldg., Baltimore; Clyde N. & Nelson Friz, Archts., Lexington Bldg., Baltimore; John Russell Pope, Consult. Archt., 542 Fifth Ave., New York; Chas. L. Reeder, Mech. Engr., 918 N. Charles St.; C. H. Osborne, Struct. Engr., 222 W. Franklin St.; Price Construction Co., Contr., Maryland Tr. Bldg., all Baltimore. 6-12

Tex., Dallas—Young Men's Christian Assn. let contract at \$105,950 to A. J. Rife Construction Co., 1913 N. Harwood St., for Oak Cliff branch; brick, tile, stone and rein. conc.; Bryan & Sharp, Archts., Construction Industries Bldg.; elect. work, plumbing, heating and ventilating bids rejected, call bids later. 10-24

Bank and Office

La., Port Allen—Port Allen Bank & Trust Co., let contract to S. & W. Construction Co., Shrine Bldg., Memphis, Tenn., to move and repair bldg.; new foundation and flooring; Wm. E. Burk, Archt., Balter Bldg., New Orleans, La.

Mo., Kansas City—Following sub-contracts let on \$2,000,000 Bryant Bldg., for Harriet M. Bryant Estate; Elevators, Otis Elevator Co., 11th Ave. and 26th St., New York;

struct. steel, McClintic-Marshall Co., Oliver Bldg., Pittsburgh, Pa.; tile arch., U. S. Fireproofing Co.; lumber, Badger Lumber Co.; wrecking, King Lumber Co., 1725 Troost Ave.; heating ventilating, U. S. Engineering Co., 914 Campbell Ave.; plumbing, Katz & Lewis Plumbing Co.; bulk materials, Stewart Sand & Material Co., 304 City Bank Bldg.; and Welch-Sandler Cement Co., 1311 E. 19th St., all Kansas City; mail chute, Cutler Mail Chute Co., Rochester, N. Y.; steel erection, Bass Construction Co.; lath and plaster, Walter Plastering Co., 236 Railway Exchange Bldg.; elect. wiring, W. P. Allison Co.; excavation, Norton Bros., 103 W. Armour Ave., all Kansas City; misc. and orna. iron and bronze, General Bronze Corp., Long Island City, N. C.; mill and cabinet work, Mathews Bros., Belfast, Maine; cut stone, Indiana Limestone Co., Bedford, Ind.; terra cotta, Northwestern Terra Cotta Co., 1105 Waldheim Bldg., Kansas City; granite, Cold Spring Granite Co., Cold Spring, Minn.; hollow metal, Niedringhaus, Inc., St. Louis, Mo.; hardware, Richards & Conover Hardware Co., 5th and Wyandotte St.; metal windows, Campbell Metal Window Corp., Bush & Hamburg Sts., Baltimore, Md.; slag brick, Silica Brick & Engineering Co., 228 N. LaSalle St., Chicago, Ill.; moulded and face brick, Hydraulic Press Brick Co., 324 Rialto Bldg., Kansas City; Graham, Anderson, Probst & White, Archts., 80 E. Jackson Blvd.; Thompson-Starrett Co., Inc., Contr., 104 S. Michigan Ave., both Chicago. 3-20

Tex., San Antonio—Ward McAllister, Builders Exchange Bldg., started work re-

modeling McAllister Bldg., Navarro and College Sts., damaged by fire; \$60,000; 4 stories; W. E. Simpson Co., Engr.; John Westeroff, Contr., both Milam Bldg.

Tex., San Antonio—Brady Estate remodel 3-story Brady Bldg., Houston St.; set back several ft.; \$30,000; Robt. Kelly, Archt., Milam Bldg.; W. N. Hagy, Contr., 312 Navarro St.

Va., Roanoke—Richardson-Wayland Electrical Corp., has elect. work contract at about \$50,000 for \$500,000 Norfolk & Western Railway office bldg. W. P. Wiltsee, Ch. Engr., for owner; J. P. Pettyjohn & Co., Contrs., 212 Eight St., Lynchburg, and Roanoke. 6-5

Churches

D. C., Washington—Western Presbyterian Church, Rev. J. Harvey Dunham, Pastor, 2109 G St. N. W., let contract to Davis, Wick, Rosengarten Co., Inc., 1406 G St. N. W., for \$200,000 church and Sunday school; Gothic type, stone, limestone trim; church 48x85 ft.; Sunday school 2 stories and basement, 37x100 ft.; rein. conc. and wood finish floors, conc. foundation, slate roof; Norman Hulme, Archt., 1524 Chestnut St., Philadelphia, St. 10-10

Miss., Poplarville—Baptist Church, H. K. Rouse, Chmn., Bldg. Comm., let contract at \$23,300 to L. E. & W. F. Breland, New Augusta, for rein. conc. and brick bldg.; 2 stories and basement, 60x93 ft., wood floors, steel and iron work, sheet metal work; P. J. Krouse, Archt., M. & W. Bldg., Meridian. 6-5

N. C., Belmont—Belmont Presbyterian Church started work on 28x64-ft. temporary addition.

N. C., Morganton—First Baptist Church let contract to Robert M. Perry, Hickory, for \$20,000 educational building.

N. C., Oteen—Baptist Church organized; started work on foundation of bldg.; to be member of Buncombe County Baptist Assn.; Address Dr. Wm. Russell Owen, Pastor, First Baptist Church, Asheville.

S. C., Columbia—John J. Morton, W. Morehead St., Charlotte, N. C., has cast stone contract for Sunday school; Lafaye & Lafaye, Archts., 1224 Sumter St., Columbia; W. A. Crary & Son, Contr., 1226 Sumter.

Tenn., Memphis—Columbus Baptist Church erect \$10,000 bldg., 990 Meriweather St.; brick veneer, 1 story, comp. roof, misc. steel and iron; H. Taylor, Archt.; Oscar Scott, Contr., 1285 Grant St.

Tex., Goose Creek—Hebrew Congregation started work on brick veneer synagogue, and frame community center bldg., W. Main and Commerce Sts.; former 36x59 ft.; L. Gilbert, Archt., Houston; C. I. Fortinberry, Goose Creek, gen. contract at about \$11,600.

City and County

Md., Baltimore—Board of Awards let contract to DeCou & Chidlaw, Eutaw & Biddle Sts., for field house, Hanlon Park, and shelter house, Hillsdale Park golf course; total \$25,000; brick and stucco, slate roof; plans by Park Board.

Miss., Hickory Flat—Mayor and City Comms. let contract to T. S. Wiley and Gene Mann for jail.

Tenn., Charlotte—Dickson County Court House Improvement Comsn. let contract to E. E. Austin, 726 Commerce St., Nashville, to remodel court house; \$25,000; conc. interior framing and floors, brick bearing and tile walls, two 25x40 ft. wings, 2 stories and part basement, Tile-Tex and terrazzo floors, tin roof; Dougherty & Gardner, Archts.; Thos. L. Clemmons, Engr., both Cotton States Life Bldg., Nashville. 5-15

Va., Harrisonburg—Rockingham County Court let contract to Harrisonburg Building & Supply Co., Harrisonburg, to remodel and fireproof interior of courthouse; C. H. Hinnant, Archt., Lynchburg.

Dwellings

Ark., Lake Village—Bob McWilliams erect brick veneer residence, S. Cokely Ave.; 1 story, hardwood floors, comp. roof, tile bath; J. M. Mitchell, Contr.

Fla., Lake Wales—Mrs. Wm. H. Nichols, Jr., erecting \$200,000 residence, Mountain Lake; brick, tile and stucco, 2 stories, 22x140 ft., tile floors, conc. foundation, tile roof; furnishings, equipment, etc., \$50,000; Marion Sims Wyeth, Archt., Wyeth Bldg., Palm Beach; Albinson & Co., Contrs., Bartow. 6-12

Fla., Miami Beach—P. T. Potts, care J. W. Hunt, 1130 S. W. 13th Ave., Miami, erecting Spanish type residence, 56th St. and N. Bay Rd.; steel bulkheading, docks, marine

and piling work let to G. O. Reed & Co., Miami Beach; rein. conc., conc. block, stucco and tile, marble, cork, tile, terrazzo and rubber tile floors, 6 baths; garage and servants' quarters, cost, including site, \$150,000; Martin L. Hampton, Archt., 925 Lincoln Rd., Miami Beach; following sub-contracts let: ventilation, Southern Oil Burning Equipment Co., 1350 N. E. First Ave.; plumbing, Bell & Bell; roofing, McCrea-Miller Roofing Co., 632 S. W. Eighth St.; bldg. material, Consolidated Supply Co.; steel sash and rein. steel, J. K. Brandt, City Natl. Bank Bldg.; elect. wiring, Brown Electric Co., 730 Collins Ave.; tile, Maule Ojus Rock Co., 37 N. E. First Ave.; millwork, Beach Mill & Supply Co., 1327 20th St.; orna. iron, Carl Nobis & Co., 426 S. W. Eighth St.; key-stone, John B. Orr & Co., 43 N. E. 20th St.; orna. stone, Robt. M. Schwarz, 619 S. W. Eighth St.; tile, marble and terrazzo work, Miami Marble & Tile Co.; plastering and stucco, E. E. Baker, 2236 N. W. Miami Court. 5-29

Ga., Atlanta—Victor Wade, 580 Luckie St., N. W., erect \$10,000 residence, 919 E. Rock Springs Rd., N. E.; brick veneer, 2 stories and basement, hardwood and tile floors, hot air heat; owner builds.

Ga., Augusta—Mrs. H. Gould Barrett erect \$20,000 residence and garage; English cottage type, brick, stucco and half timber, 2 stories, oak floors, interior paneling and trim, Ludowici-Celadon antique shingle tile roof; E. Lynn Drummond, Archt., 2306 Central Ave.; National Engineering & Construction Corp., Contr., Masonic Bldg.

Ga., Augusta—Mrs. L. G. Doughty, 2204 King's Way, erect frame weatherboard residence; 1½ stories, hardwood and pine floors, 2 baths, Celotex sheathing, Cabot's quilt insulation, Sheet-rock; E. Lynn Drummond, Archt., 2306 Central Ave.; Frank Wheatley Co., Contr., Union Savings Bank Bldg.

Ga., Augusta—Mrs. O. A. Herbert construct pergola, pool and well head for residence; E. Lynn Drummond, Archt., 2306 Central Ave.; C. B. Holley, Contr., 2562 Walton Way.

Ga., St. Simons Island—J. Edw. Ogden, 147 Cedar St., New York, erect residence, Sea Island Beach; hollow tile and stucco, 2 stories and basement, tile roof, 4 baths; garage and servants' quarters; Francis L. Abreau, Archt., Dunwoody Bldg.; Ledsinger \$50,000; both Brunswick, Ga. See Want Section—Building Material and Equipment. 6-26

Ga., St. Simon's Island—Arthur H. Ballard, 56 W. 45th St., New York, erect hollow tile and stucco residence, Sea Island Beach; 2 stories and basement; Francis L. Abreau, Archt., Dunwoody Bldg.; Ledsinger & Turner, Newcastle St., gen. contract at \$50,000, both Brunswick, Ga. See Want Section—Building Material and Equipment. 6-26

Ga., Columbus—Lloyd G. Bowers, Buena Vista Rd., erect number \$10,000 dwellings, Overlook; brick veneer, hardwood and tile floors, comp. roof; Chas. F. Hickman, Archt., Swift-Kyle Bldg.; constr. by Marshall Morton, care Morton Realty Co., Swift Bldg.

Ga., Thomasville—Joe M. Beutell erect erect \$20,000 residence; brick, 2 stories and basement, conc. footings, hardwood and tile floors, steam heat, slate roof; Daniell & Beutell, Archts., Georgia Sav. Bk. Bldg., Atlanta; owner builds.

Md., Baltimore—David Kleiman, 2429 Eutaw Place, erect 18 brick dwellings, 2518-34 and 2521-37 Park Heights Ave.; 2 stories, 21x44 ft. and 22x44 ft., slag roofs, steam heat; plans and constr. by owner.

Md., Baltimore—Frank Konicek, 708 Hunting Place, let contract to Packard Construction & Development Co., 508 St. Paul Place, for \$17,000 residence, 319 Thornhill Rd., Homeland; stone and stucco; Cyril H. Hebrank, Archt., 3 E. Lexington St. 6-26

Mo., Clayton, St. Louis—Laura Miller, 257 Woodbine St., erect \$18,000 residence, 6371 Alexander Drive; 2 stories and basement, 47 x36 ft., hardwood floors, tile bath, tile roof, gas boiler; Roy L. Woerheide, Contr., 6219 McPherson Ave.

Mo., Normandy Grove, St. Louis—J. Chas. Mueller & Son, 3528 Hebert St., have contract for \$15,000 brick dwelling, Augusta St.; 2 stories and basement, 40x40 ft., tile bath, hardwood floors, tile roof; Julius E. Tarling, Archt., 2806 N Grand Blvd.

Mo., St. Louis—Frank Ackerman, 7119 Waterman Ave., erect brick residence, West Moorlands sub-division; 2 stories and basement, 42x50 ft., hardwood floors, tile bath, slate roof, vapor heat, metal lath; Maritz & Young, Inc., Archts., Chemical Bldg.; work by sub-contract.

Mo., St. Louis—Carl J. Zeitler, 3935 N. Newstead Ave., started work on brick residence, Ardsley Ave., Bel Nor; 2 stories and basement, 30x27 ft.; Wedemeyer & Nelson, Archts., 826 Wainwright Bldg.; Stealey Manufacturing Co., Contr., 6515 Page Blvd.

Mo., St. Louis—F. P. Grimm, 1114 Dover Place, erect \$12,000 brick residence, 3890 Federer Place; 2 stories and basement, 34x30 ft., hardwood floors, tile bath, slate roof, hot water heat; Nolte & Nauman, Archts., 3832 W. Pine Blvd.; work by sub-contract.

Mo., St. Louis—J. A. Fife, 4223 Peck Ave., erect \$10,000 residence, 4656 Lee Ave.; brick, 2 stories and basement, 25x30 ft., hardwood floors, tile bath, asphalt shingle roof, hot water heat; B. Schaefer, Contr., 6325 Ouida Ave.

Mo., St. Louis—Alan T. Smith, care Smith & Gauger, Archts., Louderman Bldg., erect brick and wood shingle residence, Warson and Ladue Rds.; 2 stories and basement, 60x39 ft. with two wings, 40x30-ft. and 28x30-ft.; Wilkins & Phillippi, Contrs., Amer. Tr. Bldg. 6-5

Mo., University City, St. Louis—W. P. Morgan, Jr., 1408 Anna Ave., erect \$12,000 brick residence, 7353 Carlton St.; 2 stories and basement, 34x29 ft., hardwood floors, tile bath, hot air heat, asphalt shingle roof; F. G. Avis, Archt., 1021 Big Bend Blvd.; work by sub-contract.

Mo., University City, St. Louis—Wm. H. Duenke, 8306 Eads Ave., erect \$10,000 residence, 1600 Hanley Rd.; brick, 1 story and basement, 34x38 ft., tile bath, hardwood floors, asphalt shingle roof, hot air heat; work by sub-contract.

Mo., University City, St. Louis—Jas. A. Saries, 4207 Labadie Ave., erect \$10,000 brick residence, 7310 Colgate Ave.; 1½ stories and basement, 31x30 ft., hardwood floors, tile bath, asbestos shingle roof; Julius Tarling, Archt., 2806 N. Grand Blvd.; work by sub-contract.

Mo., University City, St. Louis—Mrs. Lottie E. Field, 4531 Chouteau Ave., erect \$10,000 residence, 6949 Dartmouth Ave.; brick, 1½ stories and basement, 30x26 ft., hardwood floors, tile bath, slate roof, hot water heat; Frank Winnen, Contr., Beers Hotel, Grand and Olive Sts.

Mo., University City, St. Louis—C. E. Faith, 6756 Chamberlain Ave., erect \$10,000 brick residence, 7473 Stanford Ave.; 1½ stories and basement, 27x31 ft., hardwood floors, tile bath, comp. shingle roof, hot water heat; Lon Hunicke, Contr., 1259 Boland Place.

Mo., University City, St. Louis—R. Peck, 4050 Delmar Blvd., erect \$12,000 residence, 7237 Cambridge Ave.; brick, 2 stories and basement, 27x41 ft., hardwood floors, tile bath, tile roof, steam heat; E. F. Schooley, Contr., 5826 Page Ave.

Mo., University City, St. Louis—Harold S. Stinson, 7135 Amherst Ave., erect \$10,000 brick residence, 7464 University Drive; 2 stories and basement, 35x34 ft., hardwood floors, conc. block foundation, hot water heat; work by sub-contract.

Mo., University City, St. Louis—Archib B. Klein, 5705 Clemens Ave., let contract to Blvd., University City, for brick residence, Berkley Construction Co., Inc., 6625 Delmar Vasser Ave.; 2 stories, stud partitions, conc. and wood joist, oak floors, slate roof, conc. block foundation; John Warren Teasdale, Archt., First Natl. Life Bldg., St. Louis.

Mo., Webster Groves, St. Louis—Earl Page, 421 Woodlawn Ave., erect \$10,000 brick residence, 659 Locksley Place; 2 stories and basement, 25x38 ft., hardwood floors, tile bath, comp. shingle roof, hot air heat; T. L. Johnson, Contr., 6925 Columbia Ave., University City, St. Louis.

Mo., Webster Groves, St. Louis—Minnie Delugach, Marion Place, Afton, Mo., erect \$10,000 brick residence, 1101 Spring St.; 1 story and basement, 28x40 ft., hardwood floors, tile bath, comp. shingle roof, hot air heat; work by sub-contract.

Mo., Webster Groves, St. Louis—Minnie A. Roop, 339 N. Gore Ave., erect \$10,000 residence, 301 N. Rock Hill Rd.; brick, 2 stories and basement, 31x25 ft., hardwood floors, tile bath, comp. shingle roof, hot air heat; Parnell Quick, Contr., 240 W. Big Bend Blvd.

Mo., Webster Groves, St. Louis—Geo. P. Hassengale, 6327 N. Rosebury Ave., erect \$10,000 frame and stucco residence, 545 Lee Ave.; 2 stories and basement, 34x28 ft., hardwood floors, comp. shingle roof, tile bath, hot air heat; Ames & Ames, Contrs., 124 W. Jackson Blvd.

N. C., Greensboro—Mrs. Geo. A. Mebane, 501 W. Washington St., erect \$18,000 residence, Sunset Ave. and Woodland Drive; brick veneer; Burns-Hammond Construction Co., Contr., Jefferson Bldg.

Tenn., Memphis—Dr. Neumon Taylor, Bank of Commerce Bldg., erect \$18,000 residence, 275 Hilton Rd.; brick veneer, 2 stories, hardwood floors, tile roof and baths, hot water heat; Clinton Building Co., Contr., 197 Monroe Ave.

Tenn., Memphis—J. L. White, Jr., 10 S. Second St., erect \$10,000 duplex, 1859 Gallo-way St.; brick veneer, 1 story, 34x54 ft., hardwood floors, 2 tile baths, 10 rooms, gas heat; R. L. Seig, Archt., Sterick Bldg.; owner builds.

Tenn., Memphis—R. S. Magee, Fidelity Bk. Bldg., erect \$20,000 dwelling, 55 St. Andrew St.; brick and stone, 2 stories, 34x73 ft., hardwood floors, 3 tile baths, 10 rooms, gas heat; owner builds.

Tenn., Nashville—C. Runcle Clements, 2212 State St., let contract to Foster-Creighton Co., Fourth and First Bldg., for \$60,000 residence, Harding Rd. and Jackson Blvd.; brick, stone and conc., 2 stories and basement, 26x88 ft., with 97x34-ft. wing; Geo. D. Nevins & Wm. L. Dalrymple, Archts., Ind. Life Bldg.; interior decorating, A. Herbert Rodgers, 2410 West End.

Tenn., Nashville—Rev. A. J. Smith, 604 Seventeenth Ave., South, erect \$11,000 residence; brick, 2 stories, comp. shingle roof, tile, oak and pine floors, 2 baths; work by sub-contract.

Tex., Austin—Dr. N. R. Jackson, Norwood Bldg., let contract at \$12,961 to Frank R. Rundell, 107 E. Sixth St., for residence, Pemberton Heights; brick veneer, 2 stories and basement, oak and tile floors, asbestos shingle roof; Edwin C. Kreisler, Archt., Scarbrough Bldg.

Tex., Houston—Mrs. Katherine B. Mott has permit for \$35,000 dwelling, 3027 Inwood Drive; brick veneer, 2 stories, 14 rooms; Burns & James, Archts., Indianapolis, Ind.

Tex., Houston—Paul E. Burger, 811 Brandy St., Asst. Sales Mgr., Texas Co., 720 San Jacinto St., erect \$10,000 residence, 2121 Dunstan Rd.; brick veneer, 2 stories; M. G. Worrell, Contr., 1314 Westheimer Ave.

Tex., Houston—River Oaks Corp., River Oaks Bldg., has permit for \$20,500 dwelling, 3015 Chevy Chase St.; brick veneer, 9 rooms.

Government and State

Ark., Blytheville—Arkansas National Guard, Little Rock, let contract at \$26,800 to H. A. Lemaster, Jonesboro, for armory; brick and stone, 1 story; Durward F. Kyle, Archt., National Bk. Bldg., Pine Bluff.

N. C., Fort Bragg—John J. Morton, Charlotte, N. C., has limestone contract for \$150,000 regimental barracks, Fort Bragg; V. L. Nicholson Co., Contr., 611 S. Central Ave., Knoxville, Tenn.

Okla., Oklahoma City—C. F. Meadors, 311 N. Harvey St., started work on \$25,000 parcel post bldg.; brick, 1 story, 100x100 ft.

Okla., Tulsa—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., probably call for bids after Aug. 1 for \$1,160,000 addition to Federal bldg.; stone face, 3 stories and basement.

Va., Buena Vista—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., let contract at \$49,878 to Jones Bros. & Co., Planters Bk. Bldg., Wilson, N. C., for post office.

Va., Petersburg—Department of Justice, Supt. of Prisons, Washington, D. C., let contract to Capital Construction Co., Standard Bldg., Atlanta, Ga., for dormitory, Federal penitentiary, Camp Lee; steel knock down constr.; Robert & Co., Inc., Archt., Bona Allen Bldg., Atlanta.

Va., Quantico—Bureau of Yards and Docks, Navy Dept., Washington, D. C., let contract at \$17,433 to Mechanical Engineering & Construction Corp., 519 Mills Bldg., Washington, for alterations to barracks A, B and C, Marine Barracks; at \$24,198 to Allen J. Saville, Inc., Electric Bldg., Richmond, Va., for alterations to bachelor officers' quarters (Bldg. No. 18), and at \$12,344 to same contr. for conc. reservoir.

Hospitals, Sanitariums, Etc.

Ark., Beebe—Dr. W. D. Sloan started work on 2-story office and hospital, Front St.; brick, 25x40 ft., comp. roof; F. L. Harris, Contr.

Mo., Springfield—Springfield Baptist Hospital, Dr. S. F. Freeman, Pres., let contract to J. E. Garbee, 573 E. Elm St., for \$65,000 fireproof wing; brick and steel; G. P. Reed, Archt., Woodruff Bldg.

S. C., Charleston—John J. Morton, W. Morehead St., Charlotte, N. C., has cast stone contract for Roper Hospital addition; Lockwood Greene Engineers, Inc., Archts.,

9 W. Third St., Charlotte; Gallivan Construction Co., Contr., Gallivan Bldg., Greenville, S. C.

Va., Williamsburg—Eastern State Hospital started work on 3-story bldg. for female tubercular patients; fireproof, brick and conc., 275-ft. frontage, accommodate 100; Baskerville & Lambert, Archts., Central Natl. Bank Bldg., Richmond.

Hotels and Apartments

Mo., St. Louis—K. & D. Reppell, 1025A Central St., has permit for \$10,000 tenement, 6770-72 Dillenberger St.; 2 stories, 34x50 ft., tar and gravel roof, warm air heat; H. Caplan, Archt., 722 Chestnut St.; also have permit for \$1200, 1-story, 36x19-ft., garage with comp. roof, same location; owner builds.

Mo., St. Louis—Following additional sub-contracts on \$6,000,000, 28-story apartment hotel being erected Kingshighway and Maryland Ave. by Plaza Apartment Hotel Co., Sam Koplar, 265 N. Union Blvd.; face brick up to 24th floor; Stokers, Illinois Stoker Co., Alton, Ill.; Helne Cross drum boilers, Combustion Engineering Co., 200 Madison Ave. N. Y.; thermal units, D. F. Edwards Heating Co., 23rd and Pine Sts., St. Louis; electric, Chapline Electric Co., 1509 Chestnut St.; plumbing, J. A. McBride Mechanical Equipment Co., 2646 Locust St.; 5 elevators, Otis Elevator Co., 2301 Locust Ave.; Sam Koplar, 275 N. Union Blvd., Gen. Contr.; Schopp & Baumann, Archt., 530 N. Union Blvd.; Brussels & Viterbo, Engrs., Arcade Bldg., 10-3-29

Mo., University City—B. H. Prater, Owner and Bldr., 7153 Amherst Co., has permit for \$18,000, 4-family dwelling, 7154 Amherst; 2 stories, 61x55 ft., block foundation, slate roof, vapor heat; Edw. Kelly, Archt., 6625 Delmar Blvd.

W. Va., White Sulphur Springs—Additional sub-contractors on \$1,500,000 Greenbrier Hotel addition for which John W. Cowper Co., S. K. Pierce, V. P., State Planters Bk. Bldg., Richmond, Va., has general contract, are: Glass and glazing, Sash Door & Glass Corp., Sixth and Stockton Sts., Richmond, Va.; tile and terrazzo work, R. N. Vanderberry, 507 Second Ave., Roanoke, Va.; interior partitions, United States Gypsum Co., 67 Wall St., New York; parquet floors, N. J. North, 33 W. Kinzie St., Chicago; cork insulation work, Cork Insulation Co., 154 Nassau St., New York; Philip L. Small, Inc., Archts., Engrs., Terminal Tower, Cleveland, Ohio; R. R. Patterson, Consult. Engr.

Miscellaneous

Ga., Moultrie—Henderson Furniture Co. let contract for funeral home to G. W. Milligan, Moultrie 1 and 2 stories, and basement, 94x54 ft.; conc. footings, brick walls, cast stone trim, struc. steel; comp., slate and metal roof; T. Firth Lockwood, Archt., Murrah Bldg., Columbus.

La., New Orleans—New Orleans Bridle Club, B. S. D'Antoni, Pres., 6 Newcomb Blvd., start construction about July 1 on \$25,000 clubhouse, stables and bridle path; clubhouse, colonial design, men's and women's locker rooms, screened lounging porch; stables to house 35 horses, and contain horse showers, supply room and keeper's quarters; stone tile exterior; Charles Pumilla, Bldr., Balter Bldg.

Okla., Oklahoma City—D. B. Witt erecting public market, 2728 Classen Blvd. brick and stone, 145x158 ft.; Thos. Sorey, Archt., Perrine Bldg.; C. E. Huffman & Son, Contrs., S. W. National Bank Bldg.

Tex., Houston—Houston Country Club, Harrisburg Blvd., let contract to Russell Brown Co., 3104 Main St., for \$15,000 improvements to 2-story, frame clubhouse; new wood shingle roof; private plans.

Schools

Ala., Dadeville—Tallapoosa County Bd. of Education let contract at \$28,000 to Walter Strother for 1-story and basement, brick school; comp. roof; plans by State Bd. of Education, Montgomery.

Ala., Frisco City—Bd. of Education, H. G. Greer, Supt., let contract for \$55,000 to Cumble & Son, Clayton, for brick school; 1-story, 210x180 ft., rift pine floor, Eternity shingle roof; equipment to cost \$10,000; plans by State Bd. of Education.

Ark., El Dorado—Union County Bd. of Education, J. L. Bond, Supt., let contract to Hardy Construction Co., Texarkana, for \$30,000 school in Rural School Dist. No. 2; 1-story, 125x130 ft., 9 classrooms and auditorium, brick veneer; Hunter & Boyd, Archts., Armstrong Bldg., El Dorado.

Ark., Paris—Board of Trustees, Parish Special School Dist. No. 7, let contract at \$27,286 to C. R. Carty, 217 N. Beech St., Little Rock, for high school addition; to

J. D. Brock, Arkadelphia, at \$16,189 for grade school addition.

Ark., Pea Ridge—Pea Ridge Special School Dist., J. P. H. Roulhac, Dis., erecting by subcontract a \$25,000 school and gymnasium; brick, 1 story and basement; plans by State Bd. of Education, Little Rock.

Ark., Winslow—Washington County Bd. of Education, O. W. Bass, Supt., Fayetteville, let contract to Lineberger and Martin, Springdale, for 1-story and basement, stone, 7-classroom school.

La., Dubach—Lincoln Parish School Bd. Ruston, let contract at \$31,640 to Tom Wilmoth, Camden, Ark.; 12 classrooms and auditorium; rein. conc. foundation, built-up comp. roof; Hunter & Boyd, Archts., 410 Armstrong Bldg., El Dorado, Ark.

Md., Baltimore—Bd. of Awards let contract to Henry L. Maas & Sons, Inc., 1119 Ensor St., at \$33,850 for improvements and additional classrooms at Maryland Institute, Baltimore St. and Market Pl.

Md., Golden Ring, Towson—Baltimore County School Board, S. Shoemaker, Pres., Towson, let contract to Price Construction Co., Maryland Trust Bldg., Baltimore, for \$250,000 high school, Philadelphia Rd. near Golden Ring Rd.; 3 stories, 205x61 ft., with wing, 50x60 ft., brick and rein. conc., slate and slag roof, wood floors; cement floors in corridors and toilets; Smith and May, Archts., Calvert Bldg.; cement to Belair Road Supply Co., 5502 Belair Road, both Baltimore; rein. bars to Concrete Steel Co., 42 Broadway, New York.

Md., Baltimore—Bd. of Awards let following contracts for school repairs: Electric wiring in Schools Nos. 75, 79, 84, 92, 202, 214, 237-A, Enterprise Electric Co., 4 W. Barre St., \$7,711; plumbing in Schools Nos. 14, 53, 79, 221, DeCon & Chidlaw, Eutaw and Biddle Sts., \$17,397; heating system in Schools Nos. 60 and 70, George H. Schaffer, 4017 Falls Rd., \$4,008; painting Schools Nos. 60, 62, 65, 120, Basil B. Wells, \$10,201.

Miss., Duck Hill—Montgomery Special Consolidated School Dist. Bd. of Trustees let contract at \$35,955 to Walter L. Perry, Philadelphia, Miss., for 1-story, brick and stone trim high school with auditorium and gymnasium, and for 1-story, brick vocational building; N. W. Overstreet, Archt., Miss. Fire Insurance Bldg., Jackson.

Mo., Joplin—Bd. of Education, Dr. J. J. Burnette, Pres., let contract at \$69,866, to W. R. McCormick Construction Co., Joplin National Bank Bldg., for Emerson Grade School; Univent heating, and plumbing to Barton & Law, 1040 Main St., at \$18,670; electrical work to the Chandler Shop, at \$3,050; Felt, Dunham & Kreihm, Archts., Balcony Bldg., Kansas City.

Mo., Maryville—Bd. of Education, R. F. Hofmer, Pres., let contract to G. F. Construction Co., Exira, Iowa, for \$110,000, 2-story, brick elementary school; heating, plumbing and ventilating contract to Judd Plumbing & Heating Supply Co., 4400 E. 15th St., Kansas City; electric wiring to Nelson Electric Co., Fort Scott, Kansas; Felt, Dunham & Kreihm, Archts., 300 W. 47th St.

N. C., Canton—John J. Morton, W. Moreland St., Asheville, has cut stone contract in connection with high school, for which L. L. Merchant Co., 91 Patton Ave., Asheville, has general contract; 12 rooms, gymnasium and auditorium; rein. conc., brick and tile, Indiana limestone trim, built-up roof; Breeze & Rivers, Archt., Asheville.

N. C., Greensboro—Agricultural and Technical College, Dr. F. H. Bluford, Pres., let contract to Burrow & Lamb, Asheville, for Dudley Memorial Building; 3 stories, 164x54 ft., brick, limestone; 14 classrooms, library, physics laboratory, offices; Charles C. Hartman, Archt., Jefferson Standard Bldg., Greensboro; \$90,000.

N. C., Hickory—Lenoir Shyne College, H. B. Schaeffer, Pres., plans campaign to raise \$400,000 to add to endowment and properties.

N. C., Saw Mills—County Bd. of Education, Lenoir, let contract to H. C. Cline, Hickory, at \$14,000 for brick and tile school; 134x71 ft., gum or oak floors, comp. roof; brick foundation; equipment to cost \$5,000, address proposals to Bd. of Ed., Lenoir; Q. E. Herman, Archt., Hickory.

Okla., Altus—Following have subcontracts on \$150,000 high school for which H. W. Underhill Construction Co., Braniff Bldg., Oklahoma City, has general contract: Millwork, Steves Sash & Door Co., 602 Monterey Ave., San Antonio, Tex.; face brick, United Clay Products Co., Lee Bldg., Kansas City, Mo.; common brick, Acme Brick Co., Braniff Bldg.; stone, O. K. Cut Stone Co., 716 W. Second St., all Oklahoma City; struc. and misc. iron, Larrance Tank Co., Lawton; steel, Concrete Engineering Co., Walsix Bldg.,

Kansas City, Mo.; 1 and 2 stories, 16 classrooms; Tonini & Bramblett, Archts., 416½ W. Main St., Oklahoma City; Mrs. Elmer Garrett, Clk., Bd. of Education. 6-19

Okla., Felt—Bd. of Education, Orris L. McBride, Supt., let contract to George W. Payne, Taloga, for \$40,000 school; The Huseman Co., Archt., Chickasha. 5-29

Okla., Gould—School Board let contract at \$22,000 to Lee Wade, Duncan, for school; 4 classrooms, auditorium, study hall and economics room; Hawk & Parr, Archts., First National Bank Bldg., Oklahoma City. 5-29

Okla., Chickasha—Bd. of Education, B. B. Barefoot, Clk., let contract for 4 schools to C. H. Sikes; Junior High School Addition, \$10,667; West, North and South Schools at combined bid of \$63,103; E. H. Eads & Co., Archts. 6-19

Okla., Miami—Bd. of Education let contract to Barbour & Short, 229 W. Main St., for brick, steel and cast stone school; 1 story, 25x90 ft.; \$12,000, equipment \$3,000; Layton, Hicks & Forsythe, Archts., Braniff Bldg., Oklahoma City. 6-19

Okla., Sayre—School Bd. let contract at \$47,200 to Wm. Lambert Construction Co., 1812 W. 16th St., Oklahoma City, for grade school; 12 rooms and auditorium, 2 stories, brick and conc.; The Butler Co., Archts., Insurance Bldg., Oklahoma City. 5-22

Okla., Tulsa—Following additional firms have subcontracts in connection with the \$250,000 University of Tulsa stadium, for which Manhattan Construction Co., Court Arcade Bldg., has general contract; Millwork, American Sash & Door Co., 16th and Bellefontaine St., Kansas City; brick, United Clay Products Co., Court Arcade Bldg., Tulsa; stone, Algonite Stone Mfg. Co., East Park & Irving St., Oklahoma City; steel, Patterson Steel Co., 801 Xanthus St., Smith & Senter, Archts., Philtower Bldg. 6-19

S. C., Fort Mill—Fort Mill School Dist. Trustees, Dr. J. B. Elliott, Chmn., let contract for \$75,000 high school to C. A. Morrison & Son, Shelby, N. C.; 2 stories and basement, 100x200 ft. wood floors, conc. foundation, brick walls, stone trim, comp roof; Hugh E. White, Archt., Commercial Bk. & Tr Bldg., Gastonia. 6-26

S. C., Red River—School Bd. let contract to J. E. Healan for frame school; A. D. Gilchrist, Archt., both Rock Hill. 6-19

Tenn., Chattanooga—Hamilton County Bd. of Education, Judge Will Cummings, Chmn., let contract at \$26,000 to R. L. Cameron for 1-story and basement, brick school for colored children; comp. roof, wood and cement floors; Gordon L. Smith, Archt., Volunteer Life Bldg. 5-29

Tex., Amarillo—Amarillo Ind. School Dist. started work on \$54,000, 2-story, brick and conc. addition to Bivins School; Clem Anderson, Contr., 1010 W. Sixth St.; Kerr & Walsh, Archts., Oliver Eakle Bldg. 6-12

Tex., Dalhart—Dalhart Independent School District Trustees let contract to W. Frank Little Constr. Co., Amarillo, for school; to Dalhart Hardware Co. for plumbing and heating; \$67,700; 12 rooms, auditorium and gymnasium; J. Roy Smith, Archt., Blackburn Bldg., Amarillo. 6-12

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., let contract at \$24,530 to Rheiner & Kroeger, 306 Wyoming St., for 2-story addition and improvements to Washington Irving Jr. High School; approx. 67x60 ft., brick and rein. conc.; P. G. Silber Co., Archt., Bedell Bldg.; Matthews & Kenan Engrs.; Lloyd D. Royer, Mech. Engr., both Smith-Young Tower; Phelps & Dewees, School Archts., Gunter Bldg. 6-12

Tex., Seabrook—School Board, W. M. Day, Pres., let contract to O. H. Theriot, 2901 Franklin St., Houston, for \$20,000 conc. and hollow tile school; 1 story, 5 rooms. 6-12

Tex., Sherman—Austin College has frame-work complete on Houston Hall, administration building; contain offices, 16 classrooms, laboratory, literary society halls, auditorium with 600 seating capacity; Clyce & Rolfe, Archts.; G. D. Hill & Co., Consit. Archts. 6-12

Va., Blacksburg—Virginia Polytechnic Institute, Dr. Julian A. Burrus, Pres., let contract for \$150,000, 4-story, native gray stone, T-shaped, 120x30 ft. and 100x60 ft., dairy husbandry building to North-Eastern Construction Co., Reynolds Bldg., Winston-Salem, N. C.; electric work to William A. Burkard Co., 60 Commerce St., Norfolk; heating and steam fitting, F. L. Watson, 214 10th St., Lynchburg; plumbing, R. C. Beverley Heating Co., Inc., 308 E. Main St., Richmond; elevator, Salem Foundry and Machine Co., Salem; refrigeration doors and insulation, Cork Insulation Co., Munsey Bldg., Baltimore; contract for erection of \$25,000, 1-story and basement mechanical engineering laboratory awarded D. J. Phipps, Boxley Bldg., Roanoke; plans by C. H. Cowgill, Prof. of Architectural Engineering. 6-19

Va., Williamsburg—College of William and Mary, J. A. C. Chandler, Pres., let contract at \$152,832 to J. J. McDevitt, Builders Bldg., Charlotte, N. C., for Women's Dormitory No. 3; 3 stories, Colonial brick; first floor, addition to bedrooms, lobby and two parlors; second and third floors, single and double rooms, suites for 10 girls and to contain living rooms, kitchen, bedrooms, baths; Chas. M. Robinson, Architect, Times Dispatch Bldg., Richmond. 6-12

W. Va., Morgantown—State Bd. of Control, Henry N. Bradley, Pres., Charleston, let contract at \$193,780 to R. S. Mankin & Co., R. & P. Bldg., Huntington, for West Virginia University Demonstration High School; heating, ventilating, plumbing, \$46,620, Chas. E. Mumford, 6 Locust Ave., Fairmont; electric, \$8,751, M. O. Miller, (Potomac Electric Co.) Terra Alta; Warne, Tucker, Silling & Rutchison, Archts., Masonic Bldg., Charleston. 6-26

Stores

Ark., Texarkana—Oats Building & Construction Co. has contract to remodel store to be occupied by Famous Stores, Inc.; rebuild front, stucco with tile inserts, tile coping and conc. floor; Erhart & Eichenbaum, Archts., 113½ W. Third St., Little Rock. 6-12

Fla., Miami—Harrington Electric Co., 150 N. E. Third St., has electric contract and Alex. Orr, Jr., 45 N. W. Third St., plumbing and heating for \$100,000, 2-story, 50x190 ft., brick store, 9-15 E. Flagler St., under construction for W. T. Grant Co., 1441 Broadway, New York; J. A. Jones Construction Co., Commercial Bank Bldg., Charlotte, N. C.; E. A. Ehmman, Consit. Archt., Realty Bd. Bldg., Miami. 6-3

La., New Orleans—N. Bellamore, Inc., 601 Canal St., let contract at \$18,218 to Gervais L. Favrot, Balter Bldg., for 1-story, brick and frame store, 3425 St. Charles Ave.; Moise N. Goldstein, Archt., American Bank Bldg. 6-12

Mo., Kansas City—Frank J. and Mrs. Annie L. Dean, 1030 W. 55th St., let contract to Long Construction Co., Rialto Bldg., for remodeling and rebuilding structure, N. W. corner Westport Rd. and Main St., for stores. 6-12

Mo., St. Louis—Fox Theater Enterprises, 533 N. Grand Ave., alter 1-story showroom, 3618 Washington St.; leased to Crane Co.; \$12,000; plans by lessee; Humes-Deal Co., Contr., Arcade Bldg. 6-12

N. C., Charlotte—J. P. Propst, 21 E. 6th St., has permit for \$12,000, 2-story, brick store, 7th St. and Caswell Rd., for Cutter Realty Co., 338½ N. Tryon St. 6-12

Okla., Oklahoma City—C. E. Huffman & Son, Contr., S. W. National Bank Bldg., started work on \$45,000 store, 2712 Classen Blvd.; 1 story, 145x165, brick. 6-12

Tex., Houston—N. D. Naman, Second Natl. Bank Bldg., let contract at \$27,385 to W. E. Woodruff Construction Co., 8201 Virginia Ave., for 1-story, community store building, Richmond Rd. at Loretta St.; 53x115 ft., rein. conc., hollow tile and brick, stone trim; Joseph Finger, Archt., Democratic Bldg.; J. Weingarten, Inc., Lessee, 1502 Main St. 6-12

Tex., San Antonio—Henry Weiss started work for business building, E. Court St., to be occupied by Bose Store. 6-12

Theatres

Ark., Pine Bluff—Dr. O. W. Clark, 118 W. Fifth St., making \$10,000 improvements to West End theatre; install sound equipment; Royse Construction Co., Contr. 6-12

La., Lake Providence—Max Levy let contract at \$22,885 to Tudor & Ratcliff, Commercial Bank Bldg., Alexandria, for brick theatre to seat 750; 50x150 ft., rein. conc. foundation, struct. steel, acoustical Celotex ceiling; J. W. Smith & Associates, Archts., Ouachita Natl. Bank Bldg., Monroe. 6-12

Miss., Quitman—W. A. & S. C. McNeill erecting one-story and balcony, 36x80 ft., brick theater on Main St.; W. W. Morgan, Contr., 1426 Fourteenth Ave., Meridian. See Want Section—Building Material and Equipment. 6-26

Va.-Tenn., Bristol—Bristol Theatre Corp. erect theatre to seat 1200; brick and hollow tile walls, stone trim, steel, rein. conc. floor slab; steel truss roof; Smallman Construction Co., Contr., 1109 5th Ave., S., Birmingham, Ala.; McDonald & Co., Archts., Southeastern Tr. Bldg., Atlanta, Ga. 6-19

Warehouses

La., Alexandria—Thornton & McGinnis erecting warehouse, Harris St., to be occupied by Henry W. Palfrey, Inc., 109 De Soto St., wholesale building material and feed dealers; brick, 120x150 ft. 6-19

Trade Literature

Three-Drum Boiler.—A booklet describing a new C series of 3-drum boilers recently developed by the Erie City Iron Works, Erie, Pa., is being distributed by the company. The boiler is an adaptation of the 3-drum boiler introduced several years ago, retaining many features of the earlier product. An innovation is the elimination of the customary rear brick wall and substitution of well insulated removable plates. To reduce installation cost, many of the smaller sizes are shipped as a unit. 6-12

Pumping Machinery.—Bulletin No. 110 issued by Guild & Garrison, Inc., Brooklyn, N. Y., is devoted to its various types of pumping machinery. The G & G vacuum pumps are adapted to a wide range of service and have become standard equipment in sugar refineries and plantations, dyewood and extract plants, condensed milk factories and in other industries. The company also offers a line of centrifugal pumps manufactured by the M. T. Davidson Co., Brooklyn, with which it is associated. 6-12

Plant Location.—This caption is the title of a volume prepared by W. Gerald Holmes, an industrial engineer, and is being distributed by the McGraw-Hill Book Company, Inc., New York. It is one of the McGraw-Hill Industrial Management series and is the outgrowth of an attempt to apply the "present-day trend toward scientific management" to the important problem of locating the plant. The price of the book is \$3.00. 6-12

Electrical Farms.—A book entitled "Harvests and Highlines," issued by the Middle West Utilities Company, Chicago, briefly cites the character of service electrical energy now renders the farming industry and points to some of the problems and prospects of rural electrification and its relation to farm production in general and to other forms of power. 6-12

Hardware Directory.—The 1930 edition of the American Wholesale Hardware Directory, Edward G. Baltz, publisher, Philadelphia, has been issued. The publication lists 675 hardware jobbers of the United States and Canada, 501 heavy hardware jobbers, 558 department stores handling hardware and house furnishing goods, 88 New York hardware exporters and 355 manufacturers' agents. 6-12

Myers Water Way.—The F. E. Myers & Bro. Co., Ashland, Ohio, has issued several numbers of the Myers Water Way, an official publication of the company, since the first edition appeared last November. The Myers company manufactures pumps, water systems, hay tools, door hangars and other farm operating equipment. 6-12

Speed Reducers.—The D. O. James Mfg. Co., Chicago, has issued catalog No. 166 devoted to speed reducing transmissions developed by the company to suit every condition of drive. Southern sales and engineering offices are located in Chattanooga, Birmingham, and St. Louis, Mo. 6-12

Pressed Steel Products.—The American Pulley Company, Philadelphia, has issued a new catalogue devoted to its pressed steel products. These include pulleys, shaft hangers, hand trucks, reels, spools and beams, miscellaneous stampings and Sprucolite motor pulleys. 6-12

WANT SECTION

THE CLASSIFICATIONS IN THIS SECTION ARE:

Machinery and Supplies	Building Materials and Equipment	Bids Asked
Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.	This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.	Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.
<i>Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.</i>		

Machinery and Supplies

Canning Machinery.—Indian River Canning Co., G. K. Murdoch, Box 82, Sebastian, Fla. Wants prices and data on following:

- (1) Boiler—50 h. p.
- (2) Cooker and Cooler
- (3) Exhauster—30 ft.
- (4) Engine—steam
- (5) Pulp Machine
- (6) Plunger Filler
- (7) Syruper
- (8) Washer—Fruit and Vegetable.

Cars.—See Gasoline Locomotive.

Gasoline Locomotive.—W. M. Smith & Co., 4601 First Ave., N., Birmingham, Ala. Wants 24-in. or 30-in. gauge, good second hand gasoline locomotive and 30 or 2 cars of same gauge.

Moss Handling Machinery.—Sanford Development Co., Inc., Sanford, Fla.—Wants prices and data on equipment for manufacturing and treating Spanish Moss, including either new or used pickers, gins, combining machinery, balers, etc.

Mowing Machine (Power).—Wm. L. Clark, Asst. Sales Mgr., Harlingen, Tex., of Restlawn Memorial Park, LaFeria.—Wants data and prices on small power mowing machine.

Peanut Harvesting, Shelling, Cleaning Equipment.—Roy B. Shopp, Conslt. Engr., 403-4 Real Estate Bldg., San Antonio, Texas.—Wants prices and data on peanut harvesting, shelling, cleaning and other equipment necessary to turn out finished product.

Refrigerating and Ventilating Apparatus. Hassell, T. Hicks, Archt., Welch, W. Va., preparing preliminary plans for wholesale and retail produce plant wants prices and data on refrigerating, ventilating and other apparatus required in such a plant; also details of systems or layouts for such plant.

Rolling Mill.—Carter's Production Works, Oliver Carter, Owner, Box 1191, Wilmington, N. C. Wants good used or new small rolling mill suitable for rolling rod iron $\frac{3}{8}$ to 1-in.

Turbine Water Wheel.—David T. Vance, Plumtree, N. C.—Wants used turbine water wheel, 10 by 13 inches, horizontal type preferred, to operate under 75 ft. head, requiring 150 ft. piping; can use Pelton impulse wheel of similar capacity.

Alleghany Ore & Iron Co., F. F. Musgrove, Treas., Buena Vista, Va.—Wants prices and data on following:

- (1) Pump—small electric or gasoline driven to supply 5000 gal. water daily at 50 to 60 vertical ft.
- (2) Stack—30 to 36-in. steel smoke stack, 20 to 30 ft. high.

Miscellaneous

Markers (Cemetery).—Wm. L. Clark, Asst. Sales Mgr., Harlingen, Tex., of Restlawn Memorial Park, LaFeria.—Wants prices and data on cast iron bronze markers to set flush with ground, sizes, 12x16-in. and 18x24-in.

Zellner Chemical and Supply Co., manufacturing and distributing chemists, 110 N. Missouri Ave., Lakeland, Fla., want prices and data on:

- Back Band Webbing**—2000 ft. 2-in. and 4000 ft. 4-in.
- Back Band Buckles**—with hook to fasten into trace chains, also with ring instead
- Canvas**—5000 yds., 8, 10 and 12-ounce, 36-in. width, white or natural
- Cast Rings**—5000, 1 $\frac{1}{4}$ -in. diameter, of $\frac{3}{8}$ -in. galvanized or black enameled wire
- Rope**—4000 ft., $\frac{3}{8}$, 3/16 and $\frac{1}{4}$ -in. manila, hemp and window sash
- Rubber Tubing**—5000 ft., $\frac{3}{8}$ and 9/16-in. diameter, cored $\frac{1}{4}$, $\frac{3}{8}$ and 5/16 in.
- Wire**—5000 ft., $\frac{3}{8}$, 3/16 and $\frac{1}{4}$ -in. galvanized
- Tubular Steel**—7000 pieces, 18-gauge, 1-in. diameter, 14 to 18-in. length, split with flange, drilled for $\frac{3}{8}$ -in. bolts; for use as ladder rungs.

Metal Figures, etc.—Southern Specialty Co., P. O. Box 1699, Richmond, Va.—Wants prices and data from manufacturers of metal figures and devices.

Indian River Canning Co., G. K. Murdoch, Box 82, Sebastian, Fla., wants prices and data on following:

- (1) Cans—No. 2, 5 and 35
- (2) Cartons—fibre
- (3) Caps—for jelly jars
- (4) Jelly Jars.

Peanut Oil.—Roy B. Shopp, Conslt. Engr., 403-4 Real Estate Bldg., San Antonio, Texas.—Wants prices and data on peanut oil.

Building Material and Equipment

Broadway Development Co., 112 E. Broadway, Enid, Okla., wants prices on following for \$375,000 14-story and full basement office bldg.:

- Elevators**
- Flooring**—terrazzo, tile
- Incinerator**
- Mail Chutes**
- Marble**
- Metal Ceilings**
- Metal Doors**
- Plaster Board**
- Roofing**
- Steel Sash and Trim**
- Tile**
- Brass and Bronze Work.**

Durham Builders Supply Co., R. S. Slatery, Mgr., Box 48, Durham, N. C., wants prices and samples of following:

- Brick (face)**—sand lime.
- Edw. F. Neild, Archt., City Bank Bldg., Shreveport, La.,** wants prices on following for \$125,000 school at Vivian, La., for Cad-do Parish School Bd., Shreveport:

- Marble Partitions**
- Roofing**—built-up
- Terra Cotta Trim**
- Ventilators.**

G. L. Eubanks, Contr., Bay Minette, Ala., wants prices on following for library:

- Roofing**—asbestos shingle.

Hubbell & Hubbell, Inc., Contrs., 1316 N. E. Second Ave., Miami, Fla., want prices on following for \$100,000 apartment for Chas. D. Boulton, 805 Ocean Drive, Miami Beach:

- Cast Stone**
- Flooring**—hardwood, tile
- Metal Doors**
- Roofing**—built-up, tile
- Hugh E. White, Archt., Gastonia, N. C.,** wants prices and data on following for \$75,000 high school at Fort Mill, S. C.:

- Cast Stone**
- Cork board**
- Flooring**—tile and hardwood
- Lockers**
- Plaster Board**
- Roofing**—built-up
- Slate blackboards**

John F. Carey, Engr., Madison, Ga., wants prices on materials for 40-room hotel, including:

- Brick**
- Gas and Electric Equipment**
- Millwork**
- Roofing**
- Steam Heating Apparatus**
- Baths**
- Fans**
- Ventilators.**

Malcolm G. Simons, Archt., Builders Exchange Bldg., San Antonio, Tex., wants prices on following for \$250,000 hotel for J. J. McKinney, Beville, Tex.:

- Dumb Waiters**
- Electric Refrigerators**
- Elevators**
- Flooring**—tile
- Incinerator**
- Mail Chutes**
- Metal Doors**
- Roofing**—built-up
- Terra Cotta Trim**
- Brass and Bronze Work.**

Ledsiger & Turner, Contrs., Newcastle St. Brunswick, Ga., want prices on following for two \$50,000 dwellings, St. Simon's Island, Ga.:

- Metal Doors**
- Roofing**—tile
- Steel Sash and Trim.**

R. N. Allen, Sr., Archt., Siloam Springs, Ark., wants prices on following for \$285,000 classroom building for John Brown Schools, John E. Brown, Pres.:

- Roofing**—tile
- Vaults**
- Vault Lights**
- Brass and Bronze Work.**

S. C. McNeill, Quiltman, Miss., wants prices on following for 1-story and balcony, moving picture theatre:

- Flooring**—composition
- Metal Doors**
- Plaster Board**
- Ventilators.**

Trowbridge & Livingston, Archts., 527 Fifth Ave., New York, want prices on following for \$600,000 office bldg., Washington, D. C.:

- Elevators**
- Flooring**—linoleum, terrazzo, tile
- Mail Chutes**
- Marble**
- Metal Doors**
- Roofing (hip)**—tile
- Steel Sash and Trim**
- Tile**
- Brass and Bronze Work.**

Wade & Oemler, Archts., Miami, Fla., wants prices on following for \$75,000 dwelling, Coconut Grove, Miami:

- Cast Stone**
- Electric Refrigerators**
- Flooring**—hardwood, tile, composition
- Marble**
- Roofing**—built-up, tile
- Ventilators**
- Brass and Bronze Work.**

Bids Asked

Airway Beacons.—Chief Clerk, Department of Commerce, Washington, D. C.—Bids July 7 for revolving airway beacon lights. Proposal 22133.

Boiler.—Supvg. Archt., Treasury Dept., Washington, D. C.—Bids July 9 to furnish and install horizontal tubular boiler, etc. in U. S. appraisers stores, St. Louis, Mo.

Bridge.—State of Virginia—See Construction News—Roads, Streets, Paving.

Bridge.—Natchez, Miss. See Construction News—Bridges, Culverts, Viaducts.

Bridge.—State of West Virginia. Bids for 4 bridges. See Construction News — Roads, Streets, Paving.

Bridges.—State of Virginia. Bids for 3 bridges. See Construction News — Roads, Streets, Paving.

Bridges.—State of Tennessee. Bids for 6 bridges. See Construction News — Roads, Streets, Paving.

Crushed Stone.—See Road Building Material.

Dikes.—U. S. Engr. Office, St. Louis, Mo.—Bids July 16 for constructing 4000 ft. of timber crib dikes in Mississippi River at Slim Island.

Drainage.—Commrs. Little Opossum Drainage District, M. E. Denton, Marks, Miss.—Bids July 10 for drainage work including 11 miles of cleanout and enlargement of old canals, bottom width 12 to 20 ft., side slopes of 1 $\frac{1}{2}$ to 1 ft.; involving about 150,000 cu. yds. excavation, short dam, etc.

Drainage System.—U. S. Engr. Office, 1006 McCall Bldg., Memphis, Tenn.—Bids July 10 for constructing intercepting drainage system, involving 1,500,000 cu. yds. excavation, and appurtenant structures, Birds' Point-New Madrid Floodway, Mississippi and New Madrid Counties, Mo.

Electric Plant.—Water and Light Plant.

Filter Plant.—See Water Works.

Garage.—See Construction News Columns—Garages and Filling Stations.

Gasoline.—General Purchasing Officer, Panama Canal, Washington, D. C.—Bids July 14 for furnishing bulk gasoline, Sch. 2570.

Grinder (Motor-Driven).—Bureau of Supplies and Accounts, Navy Department, Washington, D. C.—Bids July 8 for centerless, motor-driven grinder, including instruction in operation; to have grinding capacity from 3/4-in. to 3-in. diameter and be fitted with 1 grinding and one regulating wheel mount; truing diamonds 1 1/2 to 1 3/4 karats; 20x6x12 grinding wheel; 12x6x5 regulating wheel. Sched. 3720.

Hack-Saw Blades.—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids July 15 for tungsten and high-speed steel, hack-saw blades of following types; hand-frame, hard and flexible machine blades, all-hard and for cutting corrosion resisting steel. Sched. 3657.

Heating Boiler.—Treasury Dept., Office of Supvg. Archt., Washington, D. C.—Bids July 16 for furnishing labor and material required for heating boiler in U. S. P. O. Charlottesville, Va.; Jas. A. Wetmore, Acting Supvg. Archt.

Heating System.—Supv. Archt., Treasury Dept., Washington, D. C.—Bids July 23 for alteration to heating system, etc. in U. S. custom house, El Paso, Tex.

Hydraulic Press.—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids July 18 for joggling, hydraulic press; delivery Puget Sound Navy Yard, Bremerton, Wash. Sched. 2682.

Ice Plant.—City of Denton, Tex., W. N. Harris, City Engr.—Bids July 14 for equipment and erection ice plant, 25 tons daily capacity, plant to be installed in municipal building; bids on either raw or distilled water ice; information on application.

Lathe and Timber Sawing Machine.—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids July 8 for motor driven, 13-in. by 5-ft. bed, precision, tool-room lathe; delivery, Brooklyn, N. Y. and July 15 for portable, air motor driven, timber-sawing machine; delivery, Mare Island, Calif.; Sched. 2678.

Levee.—Bd. of Supervisors, Pontotoc County, Pontotoc, Miss.—Bids July 8 for constructing levees in Gwin and Yocoma Creek bottoms; approximate quantities 3400 cu. yds. borrow excavation.

Limestone Chatts.—See Road Building Material.

Lumber.—U. S. Engr. Office, Huntington, W. Va.—Bids July 7 for 53,000 ft. of lumber.

Lumber.—U. S. Engineer Office, Huntington, W. Va.—Bids July 7 for yellow pine, hemlock, fir or other lumber suitable for box-type cofferdams; Lot A—For Lock 1, Little Kanawha River; 8 pcs. 6x10-in.x22 ft.; 70 pcs. 6x10-in.x20 ft.; 12 pcs. 6x8-in.x22 ft.; 180 pcs. 6x8-in.x20 ft.; 90 pcs. 4x6-in.x20 ft.; 650 pcs. 2x12-in.x20 ft.; Lot B—For Dam No. 26, Ohio River; 40 pcs. 6x8-in.x22 ft.; 90 pcs. 6x8-in.x20 ft.; 60 pcs. 6x8-in.x18 ft.; 140 pcs. 4x6-in.x20 ft.; 200 pcs. 2x12-in.x24 ft.; 310 pcs. 2x12-in.x20 ft.; all rough.

Miscellaneous.—General Purchasing Officer, Panama Canal, Washington, D. C.—Bids July 16 for automobile, truck loaders, metal partitions, toilet trimmings and accessories, metal beds, water meters, kerosene and gasoline meters, sediment traps, steel, iron, wire rope, wire, manila rope, rails, trick material, pit iron, staybolt iron, tube, sheet and ingot copper, yellow and monel metal, bronze, brass, nickle-steel billet, ferromanganese, ferrosilicon, ferrotitanium, pipe, drill rods, manhole frames and covers, lead, fire bricks, chain, nails, tackle blocks, ladders, boiler lagging, felt roofing, prepared roofing hose, calamine, toilet compound, fire clay, rattan webbing, rosin-sized paper, excelsior, Douglas fir timbers, cypress lumber, white pine or sugar pine lumber. Sched. 2571.

Pipe (Vitrified).—See Sewer Construction.

Pipe (Cast Iron).—See Sewer Construction.

Plate Bending Roll.—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids July 8 for motor driven, plate bending roll; delivery Mare Island, Calif.; Sched. 2669.

Plate Bending Roll.—Bureau of Supplies and Accounts, Navy Department, Washington, D. C.—Bids July 22 motor-driven, plate-

bending rolls; for Naval Station, Cavite, P. I. Sched. 3712.

Power Plant.—See Water Works.

Plumbing.—Supv. Archt., Treasury Dept., Washington, D. C.—Bids July 21 for plumbing fixtures, etc. in U. S. custom house and courthouse, El Paso, Tex.

Presses.—Div. of Supplies, Dept. of Commerce, Washington, D. C.—Bids July 11 for offset presses, motor driven.

Pump.—U. S. Engr. Office, Box 1017, Memphis, Tenn.—Bids July 7 for motor driven direct current centrifugal pump.

Road Building Material.—State Highway Coman., Columbia, S. C.—Bids July 10 for crushed stone, slag or limestone chatts, graded from 3-8 inches: 462 tons f. o. b. Florence; 714 tons f. o. b. Cowards; 504 tons f. o. b. Ril on, S. C.

Road.—Charles Town, W. Va.—See Construction News—Roads, Streets, Paving.

Roads.—State of Virginia. Bids for 3 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of Virginia. Bids for 3 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of West Virginia—Bids for 10 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of Tennessee. Bids for 7 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of Maryland. Bids for 8 roads. See Construction News—Roads, Streets, Paving.

Rotary Offset Presses.—Chief Clerk, Department of Commerce, Washington, D. C.—Bids July 11 for rotary offset presses. Proposal 22392.

Slag.—See Road Building Material.

Screens.—Supv. Archt., Treasury Bldg., Washington, D. C.—Bids July 16 for insect screens at Taylor, Tex.

Septic Tank.—See Sewer Construction.

Sewer Construction.—Commrs. of Sewerage, Louisville, Ky., Matt H. Crawford, Chmn.—Bids July 8 for construction of Middle Fork trunk sewer, Sec. F, Contract No. 48, 5600 ft. of 24-in. vit. pipe sewer in conc. cradle, inverted siphons with inlet, outlet and cleanout chambers, manholes, etc.; Woolsey M. Caye, Tech. Engr.

Smelting Plant.—Ch. of Yards and Docks, Navy Dept., Washington, D. C.—Bids July 16 for 1 story steel frame smelting plant, 57x102, 38 ft.; also for constructing conc. tunnel at Navy Yard, Washington.

Steam Hammer Hose, Capstan.—U. S. Engineer Office, Huntington, W. Va.—Bids July 8 for 2 1/2-in. inside diameter hose for steam hammer, Boss or Mulconroy male and female couplings at each end; for vertical barrel, compressed air-driven capstan, complete and ready for operation for Lock No. 28, Ohio River.

Street.—Booneville, Ark. See Construction News—Roads, Streets, Paving.

Valve Cushions (Rubber).—U. S. Engineer Office, Huntington, W. Va.—Bids July 9 for 50 medium soft rubber valve cushions; delivery Lock 6, South Charleston, W. Va.

Water Works.—Hattiesburg, Miss., receives bids July 17 for materials, labor and equipment of improvements to water works system, including pumping station and power plant, aerator, filter plant and high level pumping plant to present distributing system; information on application to Thomas H. Allen, Consit. Engrs., 65 McCall St., Memphis, Tenn.

Water and Light Plant.—City of Natchitoches, La., O. F. Himel, Clk.—Bids July 24 for constructing addition to present building of water and light plant and finishing present building; plans, etc.—at office of city clerk.

Wire Strand.—U. S. Engr. Office, foot of Prytania St., New Orleans, La.—Bids July 12 for 1,750,000 ft. of galv. wire strand, 1/2-in. diam.

Wire Brushes.—U. S. Engineer Office Huntington, W. Va.—Bids July 7 for 100 wire brushes, torque cup, metal back, 5-in. diameter, 1 3/4-in. bristles of crimped, high tempered steel wire of about .03-in. diameter. Circular 30-227.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers, whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

For Users of Small Boilers.

The Erie City Iron Works, Erie, Pa., announces the new C series of 3-drum boilers available in a wide range of sizes from 80 horsepower up for steam working pressures up to 350 pounds. The design is an adaptation of the 3-drum boiler introduced several years ago and embodies many of the features of the early product, although manufacturing refinements have been made to provide an economical unit where space is an important consideration.

Director Westinghouse Research Laboratories.

L. W. Chubb, former manager of the radio engineering department of the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has returned to the company as director of the research laboratories. He fills the position left vacant by the promotion of S. M. Kintner to assistant vice-president.

Small Dimension Lumber.—The National Committee on Wood Utilization of the Department of Commerce, Washington, D. C., has issued a bulletin, "Small Dimension Stock, Its Seasoning, Handling and Manufacture." The bulletin deals with the subjects of mill lay-out, machinery and equipment, manufacturing practices, inspection, labor and seasoning.

New Byers Executive Announced.

H. W. Rinearson, formerly vice-president and general manager of the Armco Culvert Manufacturers Association, has been appointed vice-president in charge of sales of the A. M. Byers Company, Pittsburgh, Pa., manufacturers of wrought-iron pipe.

Hercules Appointments.

C. A. Bigelow, general manager of the explosives departments of the Hercules Powder Company, Wilmington, Del., has appointed H. V. Chase as assistant director of operations. He will assist William C. Hunt in directing operations of 11 Hercules plants in various sections of the country. W. S. Brimjoin has been appointed superintendent of the Kenvil, N. J., plant to succeed Mr. Chase.

Weather Compensating System.

A miniature operating weather compensating system exhibited by Jas. P. Marsh & Company, Chicago, at the recent annual convention of the National Association of Building Owners and Managers, held at Biloxi, Miss., is said to have attracted much interest. The display consisted of a gas fired heating boiler, a system of supply, radiation, return piping and vacuum pump equipped with Marsh compensating supply control valve, radiator valves and traps and control panel, including indicating and recording instruments.

Wagner Sales Office Appointments.

The Wagner Electric Corporation, St. Louis, Mo., has appointed Herbert Hoover to its Philadelphia branch office, where he will devote his attention to the states of North Carolina and Virginia. Mr. Hoover received his electrical engineering training at the University of Oklahoma and has served the Potomac Electric Power Company since 1923 as general distribution engineer. Appointment is announced also of H. W. Petty as branch sales manager for Pittsburgh territory, with offices in Pittsburgh, Pa. Mr. Petty has served the company as salesman in the Detroit territory since April, 1925.

Steel Trade Customs.—Standard trade customs of the steel foundry industry, as recently approved and adopted, are designed to clarify and define conditions generally accepted with respect to the purchase and sale of steel castings. A pamphlet outlining these customs is being distributed by the Steel Founders' Society of America, Inc., New York.

Rex Products.—The Chain Belt Company, Milwaukee, Wis., is distributing a 4-page folder devoted to a combination equipment unit for fertilizer elevators—the Rex Duro-bar chain, the Rex flanged rim sprockets and the Rex reinforced malleable buckets. Southern branch offices of the company are maintained in Atlanta, Birmingham, Chattanooga, Houston and St. Louis.

Incinerators.—The Duplex-Krause incinerator, according to the Duplex Incinerator Division of the Duplex Hanger Company, Cleveland, Ohio, manufacturers of this unit, is suitable for residences, large or small apartments, hospitals, schools, stores, clubs, lodges and other buildings. A catalogue illustrating and describing the incinerator has been issued by the company.

\$750,000 Hotel for Jackson, Miss.

Contracts were awarded recently on the new \$750,000 Robert E. Lee Hotel to be erected in Jackson, Miss., for the Gammill Company, general contract having been let to W. J. McGee & Son, Jackson, at approximately \$400,000. Other contracts were awarded to the Connors Steel Company, Birmingham, for reinforcing steel; Fisher-Butler Company, Memphis, face brick; Foster-Creighton Company, Birmingham, foundation, and to J. J. Baxter, Jackson, for excavation. Heating and plumbing contract was awarded to the Eldorado Heating & Plumbing Company and wiring to the Thompson Electric Company, both of Memphis. Contract for three high speed elevators was awarded to the Otis Elevator Company, New York.

The building will be 12 stories and basement, 120 by 108 feet, of stone, brick and terra cotta, the first two stories to be faced with limestone and pierced with large metal windows to admit abundance of light to the lobby. Two pairs of double doors will open into the Spanish Renaissance lobby. Floors above the mezzanine will be for bedrooms and

To Harness 57,000 Horsepower.

At the Schenectady plant of the General Electric Company, work is progressing on one of the largest hydro-electric generators ever built. The capacity of this machine, when completely assembled and in operation at the Spier Falls station of the New York Power and Light Corporation, will be 47,000 kilovolt-amperes.

Westinghouse Laboratory Cornerstone.

W. S. Rugg, vice president of the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., recently laid the cornerstone of the new \$2,000,000 Westinghouse engineering laboratory. The building, to be the tallest arc-welded structure in the world, it is said, will contain 25 laboratories for nearly every branch of the electrical industry.

New Company for Steel Plate Work.

The plant at Pottstown, Pa., of the Sotter Bros. Company has been sold to P. E. Reynolds and J. C. Hoffman, representing a group who will incorporate as the Pottstown-Sotter Tank Works, Inc., to operate it. Officers of the new company will include: P. E. Reynolds, vice-president of the Croll-Reynolds Engineering Company, Inc., New York, president; G. W. Wilmot, president of the Wilmot Engineering Co., Hazleton, Pa., vice-president; R. L. Major, Jr., formerly of Sotter Bros. Company, vice-president and general manager; S. W. Croll, president of the Croll-Reynolds Company, secretary; J. C. Hoffman, president of the Weatherly Foundry and Manufacturing Company, Weatherly, Pa., treasurer, and W. F. Otto, vice-president of the Wilmot organization, assistant treasurer. The plant will construct the same type of steel plate work as formerly, together with types similar to those which the various companies now connected with it had had fabricated elsewhere.

Johns-Manville Southern Division.

The Johns-Manville Corporation, New York, has completed a realignment of its sales divisions and districts to obtain more effective control of sales effort. A major change involves creation of a Southern Division with headquarters in New Orleans and divided into three districts with offices at Atlanta, New Orleans and Houston. The new districts are as follows: Atlanta, comprising Georgia, eastern Florida, eastern Tennessee and the greater portion of South Carolina; New Orleans, comprising Louisiana, Mississippi, Alabama, western Florida, western Tennessee, and the greater portion of Arkansas; Houston, comprising all of Texas except El Paso, which remains in the Los Angeles District of the Pacific Coast Division. J. M. Taylor, formerly manager of the New Orleans District of the Western Division, is manager of the Southern Division. J. H. Olden is manager of the Atlanta District, T. E. Gossett, of the Houston District and C. J. Flanagan of the New Orleans District.

Distributors for Hercules Engines.

The Hercules Motors Corporation, Canton, Ohio, has appointed new distributors for Hercules engines, power units and parts as follows: F. C. Richmond Company, Salt Lake City, Utah, for the Mountain States; Worthington Machinery Corporation of Oklahoma, Tulsa, for Oklahoma and adjacent territory, and the Alamo Iron Works, San Antonio, for the Winter Gardens section of Texas. Stocks will be carried by each of these representatives.

B. & O. Freight Traffic Managers.

Announcement is made of the appointment of O. S. Lewis as general freight traffic manager, and Samuel House as freight traffic manager, Baltimore, of the Baltimore and Ohio Railroad, effective July 1, by Golder Shumate, who was recently elected vice-president in charge of freight traffic.

baths, with sample rooms on the third floor and suites of rooms on all floors. Claude H. Lindsley, Jackson, is architect; the engineers are Gardner & Howe, Memphis.

Missouri Pacific Offices to St. Louis

St. Louis, Mo.—Headquarters of the Mississippi Pacific Railroad Company, established many years ago in New York by Jay Gould, have been moved to St. Louis. Control of the system was recently acquired by the Van Sweringen interests.

\$1,000,000 Railway Ferry

Washington, D. C.—In a report to the Interstate Commerce Commission, Ralph R. Molster, examiner, approves the plan of the Chesapeake Beach Railway Co., Washington, to extend its lines across the Chesapeake Bay by establishing a ferry service to connect Chesapeake Beach with Dorchester County at a point near Cambridge, a distance of 16 miles. The new ferry would involve an estimated expenditure of \$1,085,000.

Plans for \$600,000 Red Cross Building

Washington, D. C.—Plans are developing for construction of a \$600,000 headquarters building here for the American Red Cross at Eighteenth, D and E streets. The structure will be 225 by 62 feet, 5 stories. Trowbridge & Livingston are the architects and Weiskopf & Pickworth, engineers, both of New York. The building will be erected partly with government funds and will be built as a government project under the direction of Col. U. S. Grant, 3rd, Director of Public Buildings and Public Parks of the National Capital, who will receive bids and award contract. James K. McClintock is vice-chairman in charge of the finance of the National Executive Committee of the American Red Cross.

The University Club, Washington, D. C., is having plans prepared by Appleton P. Clark, Jr., Washington, for five additional stories to its building at Fifteenth and I streets, northwest, to provide enlarged living quarters, dining rooms, billiard and card rooms, gymnasium, roof garden and other facilities.

\$149,000,000 Expenditures Authorized By Rivers and Harbors Bill

Measure Passed By Congress Brings Nearer Great National System of Waterways

Washington, D. C.—Final action has been taken by both houses of Congress on the largest and most comprehensive Rivers and Harbors Bill ever passed and its approval by the President is deemed certain. As compiled in the office of the Chief of Engineers, the bill carries a total of \$146,234,952, the surveys authorized to cost about \$1,250,000, while the removal of certain limitations of cost for a number of projects will increase the total to a sum between \$148,000,000 and \$149,000,000. By the adoption of 9-foot projects on the Upper Mississippi River to Minneapolis and on the Tennessee River to Knoxville, by the authorization of a liberal appropriation for the Missouri River to Sioux City, and because of other favorable features, the bill goes far, it is thought, toward the creation of a great national system of connected waterways, as urged for many years by the National Rivers and Harbors Congress and advocated recently by President Hoover. The bill carries authorizations for Southern work as follows:

MARYLAND: Wilcomico River, \$75,000; Baltimore Harbor and Channels, \$2,504,640; Herring Bay and Rockhole Creek, \$6,300; Waterway, Tangier Sound to Chesapeake Bay, \$12,000; Choptank River, \$6,300.

DELAWARE AND MARYLAND: Inland Waterway, Delaware River to Chesapeake Bay, \$35,500.

MARYLAND: Elk River, \$6,000; Smith Creek, \$7,500; Calborne Harbor, \$12,125.

VIRGINIA: Little Machipongo River, \$10,000; Occohannock Creek, \$2,000; Nandua Creek, \$17,000; Horn Harbor, \$6,000; Monroe Bay and Creek, \$15,200; Cockrells Creek, \$59,000; Carters Creek, \$8,050; Nansemond River, \$92,300; Scotts Creek, \$31,000; James River, \$4,555,000; Norfolk Harbor, \$126,700; Willoughby Channel, \$8,500.

VIRGINIA AND NORTH CAROLINA: Inland Waterway, Norfolk to Beaufort Inlet, \$500,000.

NORTH CAROLINA: Cape Fear River at and below Wilmington, \$796,750; Edenton Harbor, \$57,000; Roanoke River, \$46,500; Mackay Creek, \$1,100; Cashie River, \$5,000; Knobbs Creek, \$79,000; Beaufort Harbor, \$55,000; Belhaven Harbor, \$55,000; Morehead City Harbor, \$35,000; Silver Lake Harbor, \$11,000; Pamlico and Tar Rivers, \$98,000; Far Creek, \$30,000.

NORTH CAROLINA, SOUTH CAROLINA, GEORGIA AND FLORIDA: Inland Waterway, Cape Fear River to St. Johns River, \$5,277,000.

SOUTH CAROLINA: Waccamaw River, \$12,500; Shipyard River, \$46,000.

GEORGIA: Savannah Harbor, \$237,000; Savannah River below Augusta, \$1,305,000; Channel from Baileys Cut to Dover Creek, \$10,000; Brunswick Harbor, \$1,130,000.

FLORIDA: St. Johns River—Palatka to Lake Harney, \$63,000—Jacksonville to the ocean, \$111,000; Hollywood Harbor (maintenance project); Miami Harbor \$200,000; Miami River, \$800,000; Caloosahatchee River and Lake Okeechobee, \$6,612,000; Tampa Harbor, \$239,200; Charlotte Harbor, \$22,500; St. Petersburg Harbor, \$45,000; St. Marks River, \$11,000; East Pass Channel, Choctawhatchee Bay, \$600.

FLORIDA AND ALABAMA: Intracoastal Waterway, Pensacola Bay to Mobile Bay, \$600,000.

ALABAMA: Mobile Harbor, \$478,000; Channel from Mobile Bay to Mississippi Sound, \$55,000.

ALABAMA, MISSISSIPPI AND LOUISIANA: Intracoastal Waterway, Mobile Bay to New Orleans, \$20,000.

MISSISSIPPI: Gulfport Harbor, \$200,000; Biloxi Harbor, \$52,000.

LOUISIANA: Chefuncte River and Bogue Falia, \$3,000.

TEXAS: Port Aransas, \$395,000; Freeport Harbor (modification); Channel from Galveston Harbor to Texas City, \$656,550; Cedar Bayou Channel, \$25,000; Houston Ship Channel, \$954,000; Channel from Aransas Pass to Corpus Christi, \$515,000; Brazos Island Harbor, \$2,158,000.

MISSISSIPPI: between Missouri River and Minneapolis, \$219,690—between mouth of Wisconsin River and Minneapolis, \$15,000—between Grafton and northern boundary of St. Louis, \$1,500,000—between mouth of Illinois River and Minneapolis, \$7,500,000. (Nine-foot project to Minneapolis adopted.)

MISSOURI RIVER: between Kansas City and Sioux City, \$15,000,000.

TENNESSEE RIVER: \$5,000,000. (Nine-foot project to Knoxville adopted.)

TENNESSEE: Cumberland River above Nashville, \$25,000.

WEST VIRGINIA: Kanawha River, \$3,603,000.

KENTUCKY: Tradewater River, \$2,500; Green and Barren Rivers, \$2,116,112; Green and Barren Rivers and Bear Creek, \$23,000.

Acquires Northern Texas Utilities Company

Amarillo, Tex.—The United Gas Corp., a subsidiary of the Electric Power & Light Corp., New York, has acquired directly and through its own subsidiary, the United Gas Co., Houston, control of the Northern Texas Utilities Co. The Northern Texas company controls in fee or by lease the gas rights on a large acreage in the Amarillo field, and owns a main pipe line and branch lines extending from this field to Wichita Falls, Tex. It has franchises and distributes natural gas in Wichita Falls and nine other communities in the intermediate territory.

Plans for \$1,000,000 Club Project Progress

The Biltmore Athletic and Country Club, with organization offices in the Emerson Hotel, Baltimore, has commissioned Frederic A. Fletcher, local architect, to prepare plans and specifications for a proposed 12-story downtown athletic club building on Calvert street, between Lexington and Saratoga streets, and for a country club building about seven miles southwest of the city. The former will be 100 by 100 feet and will contain a swimming pool, gymnasium, basketball court, hand-ball court, squash court, Turkish bath parlor, lounges, billiard and game room, ladies' dining room, private dining rooms, main dining

room, grill room, banquet rooms and about 125 guest rooms and baths. Dining facilities will be available for 2000 people daily.

A modern building will be provided for the country club, with facilities for dining, dancing and entertaining. There will be two 18-hole golf courses, a polo field, boarding stables for horses, outdoor swimming pool and playground for children. It is estimated that the city building will cost around \$850,000 and the country club facilities about \$150,000. Officers of the new club include: Wade H. D. Warfield, Sykesville, Md., president; Merle E. Towner, vice-president, and T. J. Harrison, secretary and treasurer, both of Baltimore.

Bucyrus Erie's Sales Good

June business of the Bucyrus-Erie Co., South Milwaukee, Wis., has been good, with sales volumes running ahead of May, and it is estimated that the company's earnings for the six-month period ending June 30 of this year will be slightly in excess of earnings for the same period last year. Indications are that the business for the second half of 1930 will at least equal that for the last half of 1929. The company recently completed an \$80,000 addition to its plant at Evansville, Ind. Products of the company include shovels, cranes, draglines, dredges, etc.

British Cotton Shipments

Manchester, England, June 16.—Exports of cotton yarns and manufactures from the United Kingdom during May amounted to £7,847,252 and the total of manufactured articles to £39,816,334 compared with £7,543,679 and £36,697,025 in April and £12,328,784 and £53,398,599 in May, 1929.

For the five months ended May the figures were £45,676,023 and £204,864,069 against £61,726,239 and £245,691,944 in 1929.

Shipments of cotton piece goods in May totaled £5,490,699 representing 218,088,800 square yards compared with £5,409,157 and 217,049,600 square yards in April and £8,927,832 and 321,450,000 square yards in May, 1929.

For the five months ended May the exports were £33,407,064 and 1,329,184,500 square yards against £45,837,636 and 1,710,247,400 square yards in 1929.

The cotton yarns shipped in May were valued at £1,355,579, the weight being 12,448,900 pounds. In April the figures were £1,258,110 and 11,483,200 pounds, and in May, 1929, £2,023,068 and 16,026,000 pounds.

During the five months ended May the exports were £6,855,368 and 62,038,600 pounds, compared with £9,428,370 and 73,322,600 pounds in 1929.

FINANCIAL NEWS

Bond Issues Proposed

Ala., Irondale—Street—Town, C. B. McDaniel, Mayor, receives bids July 8 for \$11,000, 6% general obligation bonds; Robert L. Totten, Inc., Const. Engrs., Brown-Marx Bldg., Birmingham.

Arkansas—State Note Bd., Ralph Koonce, State Treas., Little Rock, receives bids July 9 for \$18,000,000, \$1000 denom. not to exceed 5% highway bonds, and \$9,000,000, \$1000 denom. not to exceed 5% short term notes. 6-19

Ark., Fayetteville—School Bd. receives bids July 10 for \$175,000 bonds.

Ark., Fayetteville—Airport—City Council receives bids July 16 for \$20,000, 6%, \$500 denom. bonds for installation of runways, electric lights, hangar, etc., at municipal airport. 5-29

La., Rayville—Richland Parish Police Jury, J. C. Salmon, Sec., receives bids July 15 for \$200,000, \$1000 denom. not to exceed 6% Sub-Road Dist. No. 5 bonds.

Ky., Madisonville — Hopkins County considering issuing \$140,000 bonds for jail, almshouse, and for improving courthouse.

La., Jonesboro—Jackson Parish School Bd., W. C. McClendon, Sec., receives bids Sept. 4 for \$40,000, \$1,000 denom. not to exceed 6% Chatham Consolidated School Dist. No. 15 bonds.

La., New Orleans—City, Comsn. Council, T. Semmes Walmsley, Mayor, considering sale of \$940,000 paving certificates: \$820,000, permanent paving; \$120,000 temporary surfacing.

Miss., Gulfport—Harrison County Bd. of Suprs., Eustis McManus, Chancery Clk., receives bids July 7 for \$28,000, 5½% Wool-market Consolidated School Dist. bonds. 6-19

N. C., Lexington—City, R. P. Earnhardt, Clk., receives bids July 9 for \$125,000, not to exceed 5½% public improvement bonds. 6-26

S. C., Cayce—Cayce and New Brookland School Dist., Lexington County, voted \$100,000 bonds.

S. C., Greenville—Greenville County votes August 26 on \$275,000 bonds to purchase Chamber of Commerce building.

S. C., Greenville—City Council probably authorize issuance of \$24,000 municipal paving certificates; B. F. Dillard, Clk. and Treas.

S. C., Heath Springs—Street—City, reported, voted \$10,000 bonds.

Tenn., Chattanooga—School—City may vote Aug. 7 on \$600,000 bonds; E. D. Bass, Mayor.

Tenn., Morristown — School—City voted \$30,000 bonds.

Tenn., Nashville—City, Hilary E. Howse, reported, defeated \$1,000,000 municipal airport, \$150,000, memorial plaza, and \$150,000 municipal electric light plant improvement bonds: voted \$500,000, hospital, \$150,000 high school bonds. 3-6, 6-19

Tex., Angleton—Brazoria County, Special Road Dist. No. 29, reported, votes July 19 on \$1,300,000 bonds; Scott Gaines, County Judge.

Tex., Fredericksburg—School—City voted \$50,000 bonds.

Tex., Rusk—Cherokee County, Road Dist. No. 1, reported, voted \$250,000 bonds.

Va., South Boston—Town, J. L. Hardy, Treas., receives bids July 7 for \$100,000, 4½ to 5% bonds.

Bond Issues Sold

Ky., Russellville — Road, Bridge — Logan County sold \$100,000, 4½% coupon bonds to Caldwell & Co., Nashville, at par.

La., Bastrop—Road, Bridge — Morehouse Parish Police Jury sold \$165,000 bonds to Caldwell & Co., Nashville, at par and accrued interest.

La., New Orleans—Bd. of Levee Comms., Orleans Levee Dist., Charles J. Donner, Sec., sold \$1,300,000, 5% certificates of indebtedness to local banks at 99.50.

La., Rayville—School—Richland School Bd. E. E. Keebler, Supt., sold \$245,000 bonds: \$220,000, 5%, Dist. No. 20, jointly, to Ryan, Sutherland & Co., and W. L. Slayton & Co., both Toledo, at par, accrued interest and premium of \$610; \$25,000, 5¼%, Dist. No. 13, to Continental Bank & Trust Co., New Orleans, at par, accrued interest and \$251 premium. 6-5

La., Shreveport—Caddo Parish School Bd., E. W. Jones, Supt., sold \$150,000, 5¼%,

Vivian School Dist. bonds to City Savings Bank & Trust Co., and First National Bank of Shreveport, at par, accrued interest and \$50 premium.

Miss., New Albany—Comms. of Lappa-tubba Drainage Dist., Chas. Lee Crum, Atty., sold \$18,500, 6% drainage bonds to V. L. Harris at par. 6-19

N. C., Roxboro—Courthouse, Jail—Person County Comms., D. T. Kirby, Clk., sold \$150,000, 5% bonds to M. M. Freeman & Co., Inc., New York, at \$2685 premium.

N. C., Smithfield—Johnston County sold \$50,000 revenue anticipation notes to Bray Bros. & Co., Greensboro.

N. C., Thomasville—City, B. R. Harris, Clk., sold \$95,000, 5¼% improvement bonds to First National Bank, Thomasville, at par.

Okla., Crescent—Crescent School Dist. sold \$22,500, 5¼% School Dist. bonds to R. J. Edwards, Inc., Oklahoma City, at par.

Tenn., Rogersville—Road—Hawkins County sold \$117,000, 5% coupon bonds to Caldwell & Co., Nashville, at \$1,400 premium.

Tenn., Savannah—Highway—Hardin County Revenue Comms., L. L. Herbert, County Judge, sold \$200,000, 5% bonds to Caldwell & Co., Nashville, at \$1,000 premium. 6-12

Building and Loan Associations

W. Va., Wheeling—Building & Loan Protective Corp. of Wheeling, capital \$100,000, chartered; Joseph H. Reass, Jr., Wheeling; Tom G. Moore, Logan.

New Financial Corporations

Ga., Summerville—Farmers and Merchants Bank, reorganized; C. P. Thompson, Pres.; Benjamin Reigel, V.-P.; Grady Cole, Cashier.

Ky., Hopkinsville—First City Bank & Trust Co., capital \$400,000, formed by merger of City Bank & Trust Co., W. T. Tandy, Pres., and First National Bank G. C. Long, Pres.

Md., Baltimore — Truhlyn Corporation, Jernyn Securities Corporation and Truhlyn Securities Corporation, all 421 Title Bldg., chartered with J. Courtney Ivey, 165 Broadway, New York, and others, incorporators.

Miss., Scooba—Bank off Scooba, capital \$12,500, chartered; John L. Robinson, Pres., Scooba; J. F. Rainer, Cashier, Gordo, Ala.

N. C., Durham—Mortgage Securities Co. of Durham, capital \$50,000, chartered; J. R. Holloway, J. S. Patterson, Chas. S. Allen.

Tenn., Johnson City—Franklin Guaranty Bank, capital \$1,000,000, formed by consolidation of American Bank & Trust Co. and Franklin Guaranty Bank; George W. Keys, Chmn. of Bd.; F. L. Wallace, Pres.; I. B. Spracker, Cashier. 6-26

Tex., Hutto—First National Bank in Hutto, capital \$25,000, chartered; T. N. Mauritz, Pres.; Jennie Mauritz, Cashier.

Va., Alexandria—Mutual Savings Co., Inc., of Alexandria, capital \$20,000, chartered; A. N. Shuman, Pres.; Jesse A. Thomas, V.-P.; Ralph A. Hepburn, Treas.

Va., West Point—Citizens' Exchange Investment Corporation, capital \$100,000, chartered; Howard W. Taylor, Pres.

W. Va., Welch—First National Bank of Welch, D. J. F. Strother, Pres., plans reorganizing.

Financial Notes

Chesapeake and Ohio Income Increases.

The net railway operating income of the Chesapeake and Ohio Railway Company for May of this year shows an increase of \$169,945, as compared with May of last year, the figures reaching a total of \$3,834,755. Net income after all charges amounted to \$3,260,093, an increase of \$288,882, as compared with the same month last year, the operating ratio showing a decrease of 3.8 per cent. For the five months ended May 31, 1930, gross revenues amounted to \$756,700; 687, a decrease of \$2,970,257, as compared with the corresponding period last year, while operating expenses were \$37,885,764, a decrease of \$2,363,273. Net railway operating income was \$15,025,748, a decrease of \$963,862, and net income after all charges was

\$12,238,805, a decrease of \$98,699, as compared with the corresponding period in 1929. Operating ratio for the period was 66.8 per cent, a decrease of 0.7 per cent, as compared with the corresponding period last year.

Power Company Calls Bonds.

The South Georgia Power Company, Albany, Ga. (Commonwealth & Southern Corporation system) has called for redemption and payment on August 1, 1930, at the Mercantile Trust Company, Baltimore, all the Georgia-Alabama Power Company first refunding mortgage sinking fund gold bonds, Series A, 6½ per cent, due February 1, 1937.

Reports of Three Power Companies.

Showing gross earnings of \$2,212,441 for the month of May, 1930, as compared with \$2,019,430 for the corresponding month last year, the Georgia Power Company, Atlanta, and subsidiary companies had a gross income for May of this year of \$1,157,361, as compared with \$991,540 for the same month in 1929. Gross income for the first five months of 1930 amounted to \$5,000,823, as compared with \$5,221,629 for the corresponding period last year, while net income for the 12-month period ended May 31, 1930, amounted to \$8,272,905, as compared with \$8,295,797 for the 12-month period ended May 31, 1929.

Gross income of the Alabama Power Company, Birmingham, and its subsidiaries for May, 1930, amounted to \$819,843, as compared with \$973,252 for the same month in 1929, while gross income for the five months ended May 31, 1930, amounted to \$6,620,994, as compared with \$7,008,783 for a similar period in 1929. Net income for 12 months ended May 31 amounted to \$6,620,994, as compared with \$7,008,783 for a similar period ended May 31, 1929.

The Tennessee Electric Power Company, Chattanooga, had a gross income for May, 1930, of \$639,643, as compared with \$600,472 for the corresponding month in 1929, and a gross income for five months ended May 31, 1930, of \$3,233,312, as compared with \$2,960,945 for a similar period in 1929. The net income of the company for 12 months ended May 31, 1930, amounted to \$5,314,504, as compared with \$4,613,077 for 12 months ended May 31, 1929.

These companies are all a part of the system of the Commonwealth & Southern Corporation, New York.

Birmingham Banks Merge

Birmingham, Ala. — Stockholders of the First National Bank and the American-Traders National Bank have ratified plans of the directors for merging the two institutions. The consolidated bank will operate as the First National Bank of Birmingham with a capital stock of \$3,000,000; surplus of \$5,000,000, and undivided profits of several hundred thousand dollars. Assets of the new bank are estimated at approximately \$75,000,000. Under the merger agreement, Oscar Wells, president of the First National, will be chairman of the board; W. W. Crawford, chairman of the board of the American-Traders, vice-chairman; J. C. Persons, president of American-Traders, president; and K. W. Berry, executive vice-president.

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Honorary Committee for Road Congress

Washington, D. C.—According to an announcement by the American Organizing Commission, 1723 N street, northwest, members of the honorary committee of the Sixth International Road Congress to be held in Washington, October 6 to 11, will include President Hoover; members of his cabinet; Senator Borah, chairman of the Foreign Relations Committee of the Senate; Senator Phipps, chairman of the Committee on Post Offices and Post Roads; Representative Stephen G. Porter, chairman of the Committee on Foreign Affairs of the House, and Representative Cassius C. Dowell, chairman of the House Committee on Roads. Roy D. Chaplin, Detroit, president of the Commission, and Thomas H. MacDonald, chief of the United States Bureau of Public Roads, secretary-general, are handling details. The Congress is being

held under the auspices of the Permanent International Association of Road Congresses, with headquarters in Paris.

\$1,877,000 Low Bids on Arkansas Roads

Little Rock, Ark.—Bids tabulated by the State Highway Commission for the construction of 29 road and bridge projects indicate that the total cost of the work will exceed \$1,877,000, of which the federal government will pay approximately \$600,000. The largest project involves the construction of 11 reinforced concrete bridges in Monroe County to cost \$331,000, while the next largest covers the construction of six concrete bridges in Nevada and Clark counties to cost \$188,000. Eight projects call for 26 miles of concrete highway and one for 33.5 miles of gravel road on the Fort Smith-Hartford and the Bald Knob-Aigusta highways.

SITE FOR MARYLAND PENITENTIARY

First Unit to Cost About \$1,000,000

Hagerstown, Md.—A tract of 747 acres about five miles from this city has been selected by the State Board of Welfare, Stuart S. Janney, president, Baltimore, and approved by Governor Ritchie, as a site for the new Maryland Penitentiary. It is announced that approximately \$400,000 will be available to start construction on the new penitentiary, which will probably be built in units. Prison labor will be used as far as possible in the construction of the institution and stone on the property will be used in the buildings. The first unit, estimated to cost around \$1,000,000, would involve a hospital, assembly places, administration offices, power plant and other facilities. Water would be supplied by Hagerstown, it is said, from its Williamsport dam.

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School Courses in Lubrication for Service Station Employees

The Standard Oil Company of New York recently completed training approximately 11,000 men in 53 different schools in New England and New York State, to promote "certified lubrication service." Figures collected by the company indicate that perhaps as high as 80 per cent of the repair bills of automobiles are caused by faulty lubrication. Moreover, faulty lubrication takes away the comfort of motoring and adds to its hazards. It also was determined that the average car has about 45 points to lubricate; upwards of 25 different tools are needed; also an average of from 5 to 7 different kinds of lubricants are necessary—including motor oil, gear oil, cup grease, spring oil, lead-base lubricant, chassis lubricant and household oil.

The training was carried on over a period of six months. After a thorough grounding in the principles, the students were put to work in the lubrication pits, where for weeks, under proper supervision, they underwent practical tests on

their ability to lubricate cars. After all operators at a station qualified a certificate was given to the station, permitting it to offer certified lubrication service.

Georgia Casualty Company in Merger

Macon, Ga.—The executive committees of the Georgia Casualty Co., of this city; the Public Indemnity Co., Newark, N. J., and the Hudson Casualty Insurance Co., Jersey City, N. J., have approved plans for merging the three companies into a new one, which will have assets of \$8,000,000, capital of \$1,000,000 and surplus of \$4,000,000. Arthur T. Vanderbilt chairman of the board of the Public Indemnity Co., announces the merger will involve a change in the par value of the stock from \$5 to \$2.50, stockholders to receive one share of Public Indemnity for each \$12.50 of net value in the combined operations. Outstanding shares will be increased from 100,000 to 400,000. The home office will be in Newark.

Eight Power Developments on Cheat River Planned

Charleston, W. Va.—A formal order will soon be issued by the Public Service Commission, I. Wade Coffman, chairman, authorizing the West Virginia Power and Transmission Co., a subsidiary of the West Penn Electric Co., Pittsburgh, Pa., to develop eight power projects on the main stream of the Cheat and Blackwater rivers. The order will direct that construction on the initial projects, the Blackwater storage dam and the Blackwater power development No. 1, both in Tucker County, begin within a year after the license is granted and completed within three years. Construction on Blackwater power development No. 2, Tucker County; Beaver Hole power development, Monongalia and Preston counties; Middle Cheat development No. 2 in the same county; Albright development, Preston County, and the Erwin development in Preston and Tucker counties, is to begin on the order of the commission.



— PROPOSALS —

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



Bids close July 22, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., June 24, 1930.—SEALED PROPOSALS will be opened in this office at 3 P. M. July 22, 1930, for furnishing all labor and material required for the installation of additional toilet rooms, nurses' quarters, in the U. S. Marine Hospital at Norfolk, Va. Drawings and specifications may be obtained from the custodian at the U. S. M. H. at Norfolk, Va., or at this office, in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 25, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., June 27, 1930.—SEALED BIDS will be opened in this office at 3 P. M. July 25, 1930, for the construction of the U. S. P. O. at Kingsport, Tenn. Drawings and specifications, not exceeding six sets, may be obtained at this office, in the discretion of the Supervising Architect, by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 16, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., June 25, 1930.—SEALED PROPOSALS will be opened in this office at 3 P. M. July 16, 1930, for furnishing all labor and material required for new heating boiler in the U. S. Postoffice and Court House at Charlottesville, Va. Drawings and specifications may be obtained from the custodian at the U. S. Postoffice and Court House at Charlottesville, Va., or at this office, in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

GENERAL INFORMATION

About Proposal Advertising in Manufacturers Record

PUBLICATION DAY: Thursday.
FORMS CLOSE: 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M. Tuesday, forward by night letter or air mail when possible.

THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

The rate is the same for both publications—35 cents a line each insertion.

Bids close July 30, 1930.

Office of the Executive Officer, Arlington Memorial Bridge Commission, Navy Building, Washington, D. C. Sealed bids will be received in this office until 11 A. M. (Eastern Standard Time), July 30, 1930, and then publicly opened in Room 1613 Navy Building, for the construction of the fenders for the Bascule Draw Span of the Arlington Memorial Bridge. Approximate quantities of finished work are: Reinforced concrete, 100 cubic yards; reinforcing steel, 10 tons; structural timber, 60 M.B.M.; concrete piles, 600 linear feet; wood piles, 10,700 linear feet. Further information upon application.

Bids close July 29, 1930.

SEALED BIDS, in triplicate, subject to the conditions contained herein, will be received by the U. S. Veterans' Bureau, Room 764, Arlington Building, Washington, D. C., until 11 A. M. July 29, 1930, and then publicly opened, for furnishing all labor and materials and performing all work required for constructing and finishing complete at U. S. VETERANS' HOSPITAL, NORTH CHICAGO, ILLINOIS, C. T. BUILDING, OFFICERS' QUARTERS AND ALTERATIONS TO Dining Hall, etc., including roads, walks, grading and drainage. This work will include excavating, reinforced concrete construction, hollow tile, brick work, cut stone, cast stone, marble work, floor and wall tile, rubber tile, mastic and linoleum floors, iron work, steel sash, steel stairs with slate treads, steel clothing bins, slate, metal and built-up roofing, roof ventilators, skylight, metal lathing, plastering, carpentry, metal weatherstrips, insect screens, window shades, painting, glazing, hardware, plumbing, refrigeration, heating, electrical work and outside sewer, water, gas, steam and electric distribution systems. Bids will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract, and in making awards the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Director, drawings and specifications may be obtained upon application to the Construction Division, Room 764, Arlington Building, Washington, D. C. Deposit with application of a check or postal money order for \$50.00, payable to the TREASURER OF THE UNITED STATES, is required as security for safe return of the drawings and specifications within ten days after date of opening bids. FRANK T. HINES, Director. June 27, 1930.

Bids close July 28, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., June 30, 1930.—**SEALED BIDS** will be opened in this office at 3 P. M., July 28, 1930, for the construction of a part 2-story and basement U. S. Postoffice building, approximately 3500 square feet ground area, at Union Springs, Ala. Drawings and specifications, not exceeding six sets, may be obtained at this office, in the discretion of the Supervising Architect, by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 8, 1930.

Maryland Highway Work

**DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION**

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building eight sections of State Highway as follows:

Harford County, Contract No. H-80-42—One section of State Highway from the end of Contract No. H-66 North of Federal Hill toward Clermont Mills, a distance of 0.91 mile (alternate bids for concrete and pen. macadam).

Harford County, Contract No. H-95-411—One section of State Highway from Coopstown to Jarrettsville, a distance of 3.22 miles (concrete shoulders).

Montgomery County, Contract No. M-154-311—One section of State Highway along the Coleville Road from Burnt Mill to Whiteoak, a distance of 1.2 miles (alternate bids for resurfacing with hot and cold bituminous mixtures).

Montgomery County, Contract No. M-155-311—One section of State Highway along Leland Street, from Wisconsin Avenue to the beginning of concrete near the Bethesda-Silver Spring Road, a distance of 0.58 mile (concrete shoulder).

Prince George's County, Contract No. P-96-34—One section of State Highway from Largo to Upper Marlboro, a distance of 7.63 miles (gravel).

Queen Anne's County, Contract No. Q-55-28—One section of State Highway at the approaches to the bridge over Kent Narrows, a distance of 0.58 mile (pen. macadam).

St. Mary's County, Contract No. SM-70-811—One section of State Highway from Mechanicsville to Helen, a distance of 5.34 miles (concrete shoulders).

Worcester County, Contract No. Wo-80-111—One section of State Highway along Baltimore Avenue, Ocean City, from Ninth Street to Thirteenth Street, a distance of 0.25 mile (concrete shoulders).

Will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M., E. S. T., on the 8th day of July, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 24th day of June, 1930.

G. CLINTON UHL, Chairman.

L. H. STEUART, Secretary.

Bids close July 15, 1930.

Virginia Highway Work

Richmond, Va.

Tuesday, 10 A. M., office of the Va. Dept. of Highways, Richmond, Va. Rt. 31, Proj. 79B1B2, widening 2 hrs. from 16 ft. to 30 ft. over Cappawamsic Cr., Cu Yds. A Conc. 110, B 164, Reinf. Steel 22,670, Lin. Ft. Piles 1080, Rt. 815, Proj. 628, 5 Mi. Mac., Sq. Yds. Mac. 57,749, Cu. Yds. Excav. 66,295, Reinf. Steel 14,491, Rt. 14, Proj. 647, 3 Mi. Mac. or Conc. 54,194, Alt. or Reg. Cu. Yds. Excav. 44,493, Rt. 503, Proj. 652, 2.5 Mi. Conc., Sq. Yds. Conc. 25,614, Cu. Yds. Excav. 20,897. Details obtainable upon request.

Bids close July 8, 1930.

Delaware Highway Work

Dover, Del.

Sealed proposals will be received by the State Highway Department at its office, Dover, Delaware, until 2 o'clock P. M., Standard Time, July 8th, 1930, and at that place and time publicly opened, for contracts involving the following approximate quantities:

CONTRACT 148

McAllisters Corner-Wesley Church
2 Acres Clearing
2 Acres Grubbing
8000 Cu. Yds. Excavation
1600 Cu. Yds. Borrow
3100 Cu. Yds. Concrete Pavement
1700 Lin. Ft. 3-4 in. Expansion Joint
50 Cu. Yds. Class A Concrete
1000 Lbs Reinforcement
500 Lin. Ft. 15 in. C. M. Pipe
160 Lin. Ft. 15 in. R. C. Pipe
30 Lin. Ft. 24 in. R. C. Pipe
30 Lin. Ft. 24 in. R. C. Pipe
2400 Lin. Ft. Wood Shoulder Curb

CONTRACT 165

Levels Road-Dogtown
6-10 Acres Clearing
6-10 Acres Grubbing
8200 Cu. Yds. Excavation
1200 Cu. Yds. Borrow
2000 Tons Slag Base Course
420 Lin. Ft. 15 in. C. M. Pipe
180 Lin. Ft. 15 in. R. C. Pipe
30 Lin. Ft. 18 in. R. C. Pipe
30 Lin. Ft. 24 in. R. C. Pipe
300 Lin. Ft. 4 in. Pipe Underdrain
3000 Lin. Ft. Wood Shoulder Curb

CONTRACT 166

Driveways—Police Station No. 1
200 Tons Stone Base Course
1800 Sq. Ft. Concrete Sidewalk
675 Sq. Yds. Surface Course

CONTRACT 167

Cottonpatch Hills-State Lands
2800 Cu. Yds. Excavation
1800 Cu. Yds. Borrow
1500 Cu. Yds. Gravel Surface Course
90 Lin. Ft. 18 in. R. C. Pipe
30 Lin. Ft. 24 in. R. C. Pipe
30 Lin. Ft. 30 in. R. C. Pipe
1000 Lin. Ft. Wood Shoulder Curb

Performance of contract shall commence within ten (10) days after execution of the contract and be completed as specified.

Monthly payments will be made for 90 per cent of the construction completed each month.

Bidders must submit proposals upon forms provided by the Department.

Each proposal must be accompanied by a surety bond, certified check or money to the amount of at least ten (10) per centum of the total amount of the proposal.

The envelope containing the proposal must be marked "Proposal for the construction of State Highway Contract No."

The contract will be awarded or rejected within twenty (20) days from the date of opening proposals.

The right is reserved to reject any or all bids.

Complete sets of plans and specifications may be obtained upon receipt of two dollars (\$2.00) for each contract, which amount will not be refunded.

STATE HIGHWAY DEPARTMENT.

Bids close July 7, 1930.

Waterway Structures

Belzoni, Miss.

The Commissioners of the Main Separate Road District of Supervisors District No. 4 of Humphreys County, Miss., up until 12 o'clock noon, on

Monday, the 7th day of July, 1930, will receive sealed bids for the construction of waterway structures, as follows.

100-ft. Creosoted Timber Bridge 24 ft. wide.

86-ft. Re-inforced concrete culvert—Double 6'x6'

60-ft. Re-inforced concrete culvert—single 6'x6'

Approximately 48 Pipe Endwalls—12' to 48'

All to be done and furnished in accordance with plans and specifications now on file in the office of the Chancery Court Clerk of Humphreys County, Mississippi. Contract will be awarded to the lowest bidder.

Certified check for \$1,000 on and by any responsible bank, payable to Commissioners of the Main Separate Road District No. 4, Humphreys County, Mississippi.

Additional information may be had upon application to W. J. Price, Engineer, Belzoni, Mississippi.

The Commission reserves the right to reject any and all bids.

THOS. TURNER,
J. L. MILLER,
T. C. PARISH, Commissioners.
A. R. HUTCHENS, Clerk.

Bids close July 16, 1930.

Court House and Jail Building

**OFFICE OF BOARD OF COUNTY
COMMISSIONERS FOR
MONTGOMERY COUNTY**

Rockville, Md., June 17, 1930.

Proposals will be received by the Board of County Commissioners for Montgomery County for furnishing all labor and material required to erect and complete the new Court House and Jail Building on the county site at Rockville, Maryland, all in accordance with the plans and specifications prepared by Smith & Edwards, Architects, dated June 16, 1930, and under the terms and conditions of the contract documents mentioned in Article 31 of the Supplementary General Conditions; a copy of said Supplementary General Conditions will be furnished each bidder with the drawings and specifications.

Bids must be executed in duplicate and enclosed in a sealed envelope, addressed to the Board of County Commissioners for Montgomery County, and marked on the outside "Bid for the erection of the Montgomery County Court House" and delivered to Berry E. Clark, Clerk to the County Commissioners for Montgomery County, at his office in the Court House, Rockville, Maryland, by 3:00 P. M., Eastern Standard Time, on Wednesday, July 16, 1930, at which time the bids will be publicly opened.

Each bid must be accompanied by a certified check of the bidder in the amount of nine thousand dollars (\$9000.00), made payable to J. Forest Walker, Treasurer, or a bidder's bond in the penalty of nine thousand dollars, executed in conformity with the Form of Bidder's Bond received with the drawings and specifications.

The successful bidder will be required to give bond in the penalty of one hundred per cent of the contract price, and to furnish a complete list of sub-contractors expected to be used in this work.

Drawings and specifications may be secured by general contractors at the office of Smith & Edwards, Architects, located at 1707 Eye Street, N. W., Washington, on and after June 18th, 1930, by depositing a check or money order for the sum of twenty-five dollars (\$25.00), payable to J. Forest Walker, Treasurer. This deposit will be returned to the bidder when he returns the drawings and specifications, provided he submits a bona fide bid accompanied by a certified check or bidder's bond in the amount of nine thousand dollars (\$9000.00).

The County Commissioners for Montgomery County reserve the right to reject any or all bids.

BENJAMIN C. PERRY,
President of the Board of
County Commissioners.
BERRY E. CLARK,
Clerk to the Board of
County Commissioners.

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES

FOR SALE—Factory Sites, City Property, Water Frontage, Tracts for Suburban Development. Timber Lands and Colonizing Lands. H. H. Wefel, Jr., Mobile, Alabama.

FLORIDA GULF COAST, thousands of acres; timber, railroads, also two best large industrial sites in Jacksonville. Railroads and water. HERBERT MCINTIRE, Owner, Gainesville, Fla.

FOR SALE—Five thousand acres of good coal and timber land on main line of railroad and state highway, half way between Nashville and Knoxville, Tennessee. This land lies well and is well watered; electric power and light available; elevation 2000 feet; splendid soil for potatoes, fruits, berries and truck. Climate excellent. Tract ideal for summer homes and small farms. We are offering this at a real bargain.

BELLFORT LAND & COAL CO.,
V. I. Witherspoon,
Secy. and Treas.,
American Trust Co.,
Nashville, Tenn.

IRON ORE AND MANGANESE

FOR SALE.

A Brown Iron Ore and Manganese property in Murray County, Georgia, near Tenn. Line. F. A. POWELL, Ft. Myers, Florida.

LIMESTONE QUARRY

LIMESTONE QUARRY and complete equipment, including crusher 400 mesh; finished product. Full information on request. Price attractive.

G. Q. MILWEE,
408 Stahlman Bldg., Nashville, Tenn.

PLASTIC CLAY DEPOSIT

FOR SALE OR ROYALTY—Deposit of very plastic clay, dark and light colors; convenient for rail and deep water transportation. For samples and full description Pierre Robert, Scotia, Hampton Co., S. C.

MANGANESE DEPOSITS

HAVE LEAD OF MANGANESE which has been cross cut in 12 places 2 to 4 feet depth for one mile. Just right for practical man to take over and develop or sell.

Address
BOX 137, LYNCHBURG, VA.

COAL LANDS AND MINES

50,000 ACRES COAL LANDS, \$5.00 per acre. East Tennessee. On railroad; good markets North and South, with favorable freight rates. Excellent steam, domestic, by-product coals, 3 to 10 ft. seams. Producing mines on property withheld from sales. Excellent opportunity for safe, long time investment, operating or leasing. Address No. 8090, care Manufacturers Record.

PULP WOOD ACREAGE

PULP WOOD—Now is the time to buy pulp wood land cheap. Have considerable acreage, with good stand of timber. Can be bought in fee simple at close price.

P. O. BOX 279,
SUMMERVILLE, S. C.

TIMBER AND TIMBER LAND

WE HAVE exclusive sales privilege for more than 500,000 acres of Florida land at sacrifice prices. Also large areas in Georgia and South Carolina. Desirable second growth pine lands; agricultural lands adapted to tung oil and citrus crops, grazing lands, etc. To share in the assured future of Florida and the South INVESTIGATE NOW. THE JAMES D. LACEY COMPANY, 1409 Barnett Bldg., Jacksonville, Fla.

Rates, Terms and Conditions

RATES: 30 cents a line each insertion. Minimum space accepted, four lines. In estimating the cost allow six or seven words of ordinary length to a line. When the advertisement contains a number of long words proper allowance should be made.

Rates for Special Contract:

100 lines 28c a line
300 lines 26c a line
500 lines or more 25c a line

TERMS: For transient advertising cash with order; check, postoffice or express money order or stamps accepted.

On special contract advertising bills are rendered monthly, covering space used each month, payable within ten days.

CONDITIONS: No patent medicine, oil or mining stock advertisements or questionable or undesirable advertisements will be accepted. The assistance of our readers in excluding undesirable advertisements is requested. No display type used.

FARM, FRUIT AND TRUCK LANDS

FLORIDA

25-ACRE orange and grapefruit grove overlooking beautiful clear water lake; ½ mile lake frontage. Price \$18,000.00. JOHN WEHR, Realtor, Clermont, Florida.

FLORIDA BARGAIN!

Now is the time to buy in Florida 640 acres of first-class truck land at \$12.50 per acre.

P. JOHN HART REALTY CORP.,
P. O. Arcade,
Fort Myers, Fla.

LOUISIANA

ST. CHARLES PARISH, LOUISIANA, offers opportunities in cattle ranches, agricultural and industrial sites. St. Charles Bank & Trust Co., Sellers, La.

VIRGINIA

SOUTH ISLES PLANTATION

830 acres, 450 acres farming and pasture land, about 300 acres fertile river bottoms, balance woodland and timber. Large, attractive mansion in grove of several acres handsome box wood, shrubbery, flowers and many varieties of trees. Excellent stock barn, tenant house, hog sheds and other outbuildings. Near Lynchburg in good community. Price \$44,000. Full details and illustrated catalogue of other attractive places upon request.

GEO. V. VENABLE & CO., Lynchburg, Va.

SOUTHERN HOMES

OVER 500 ACRES, spring, brook, log cabin, many long leaf pines. Estate preserve. Fine fish pond "full of fish." Low acreage price. G. F. ARCHER, Aiken, S. C.

SOUTHERN HOMES

In the best city in the Carolinas. \$10,000 to \$75,000, according to size and location.

F. C. ABBOTT & CO.,
Charlotte, N. C.
32 years in Charlotte Real Estate.

BUSINESS AND INVESTMENT PROPERTIES

11,000 ACRE tract prospective oil and gas land in heart of Winter Garden District, Dimmit County, Texas. Soil adapted to culture, commercially, of dates, oranges and other citrus fruits; at investment prices. If interested, Owner, Box 656, Houston, Tex.

BUSINESS OPPORTUNITIES

FOR SALE—To right party profitable hamper and veneer mill. Located in Florida. Plenty of timber available. Address No. 8081, care Manufacturers Record.

LONG TERM LOANS, large amounts, made on industrial, mercantile, sawmill properties. THOS. W. GILMER, Attorney, Bay Minette, Alabama.

MANUFACTURERS—Write for our FREE Classification Sheets of inventions for sale, covering 135 main subjects, and in one or more of which you will doubtless be interested. ADAM FISHER MFG. CO., 578 Enright, St. Louis, Mo.

WANTED—Partner and co-worker in an incorporated national advertising and display proposition; one familiar with sales promotion and displays on a large scale preferred; references required. J. H. GEELMUYDEN, Weatherford, Okla.

WANTED TO SELL—My undivided four-fifths' interest in 87,000 acres of land lying in Morgan, Scott, Fentress, Cumberland and Roane Counties, Tenn.; terms. Known as Stanfield lands; rich in coal and iron; seven oil gushers and eight producing wells. All kinds of timber. Address R. T. WILLINGHAM, Anniston, Ala.

LUMBER AND BUILDING MATERIAL business for sale in one of the best towns in Georgia. Population increase of over 100% last ten years. Business splendidly equipped and located; oldest established plant of its kind in the section. Present owners have other interests and will sell. Not very much cash required, but must be able to handle satisfactorily. Address No. 9024, care of Manufacturers Record, Baltimore, Md.

ESPECIAL OPPORTUNITY—Wonderful opening for an experienced operator; 100-barrel capacity FLOUR MILL for sale or lease. Hydro power developed 80 to 100 horsepower. Mill modernly equipped, the only mill here. All surrounding conditions of the very best, product all absorbed locally; good wheat country. Hard surface pikes in all directions, two railroads. Population in excess of 8000; growing rapidly. Address SAM T. MILLARD, First National Bank, Elizabethton, Tenn.

WANTED—Reputable firm or person to exploit on national scale an invention. It is an improved and proven AMMONIA PRE-COOLER and ACCUMULATOR (patent applied for), which will increase, by 15% up, efficiency of dairy, ice cream, fruit precooling and ice plants. Will pool entire interest as sole owner and experimental equipment valued at \$1500 or will accept \$4250 for everything. Mean business and this is someone's big opportunity. Prints and descriptive matter mailed.

H. C. FRIERSON,
No. 508 First St. N.,
Winter Haven, Fla.

GAS PRODUCERS-INCINERATORS

MAKE GAS at a cost defying all competition. Size No. 10, price \$290. Individual service; no attendant required. Portable for camps and contractors; a sizes with a capacity to meet your requirements. Also INCINERATORS; price on request. Representatives wanted.

THE GAS-O-FLAME STOVE WORKS,
Port Deposit, Md.

DEVELOPING AND ENGINEERING

ORGANIZING—DEVELOPING—ENGINEERING

Engineering firm, widely experienced in investigating, organizing, developing, designing and supervising construction, solicit correspondence regarding development or extension of meritorious projects and existing industries, power plants and utilities. Address No. 8016, care Manufacturers Record.

FINANCIAL

MONEY WANTED

6, 7 and 8% Mortgage Loans on City, Town or Country property. Southern Land & Investment Co., Baton Rouge, Louisiana.

INDUSTRIAL SURVEYS

ENGINEERING REPORTS on resources of cities and towns. Recommendations for industrial development and zoning made by specialists in locating industries.

TECHNICAL SERVICE CO.,
Woolworth Building New York City

INDUSTRIAL PLANTS

FOR SALE—Manufacturing Plant of going concern. Need money for operating purposes. Will sign ten years' guaranteed lease at attractive rental. For full particulars address No. 8092, care of Manufacturers Record, Baltimore, Md.

FOR SALE—Slack barrel heading mill complete, including boilers, engines, shafting, jointers, pulleys, blacksmith equipment. Will sell as a whole or in part. Mill located at Tunis, N. Carolina. Address TUNIS HEADING & STAVE CO., 813 Sarah Street, S. S. Pittsburgh, Penna.

COMPLETE WOODWORKING PLANT, suitable for furniture or other wood articles. Dry kiln, side track, with ample trained labor available. Can be bought for less than one-half reproduction value. First Securities Company, Chattanooga, Tenn.

FACTORY SITES

FACTORY SITE
ON DEEP WATER

If you are seeking an ideal deep water industrial location in Baltimore, Maryland, on one of the finest harbors in the world, see advertisement on page 92, June 19th issue of the Manufacturers Record.

W. S. CAHILL CO.,
Key Highway and Webster Street,
Baltimore, Md.

PLANT SITE AND VILLAGE
IN GEORGIA

Very desirable plant site on main line Central of Georgia Railroad, 25 miles from Macon, Georgia. Good location for hosiery, overalls, spinning, etc.; also wood working, furniture and stoves. Power plant available, with deep well and pumps, 100-foot tower and tank, sprinkler system and service lines installed. Fifty good houses, club house and store. In town of 1500 population. Plenty of labor available.

NASHVILLE INDUSTRIAL
CORPORATION,
Old Hickory, Tennessee.

FACTORY BUILDINGS

ONE MODERN fireproof daylight manufacturing plant, steel and tile construction, size 100x440 feet, sixteen acres of land, 50,000-gallon concrete tank and tower, on Missouri Pacific Railroad; suitable for the manufacture of airplanes, metal and construction work, planing mill, oil well supplies, etc. Located one mile from city limits; low taxes and insurance. Attractive price; liberal terms.

ETHERIDGE BROTHERS COMPANY,
230 Broadway, San Antonio, Texas.

PATENT ATTORNEYS

PATENTS—Booklet free. Highest references. Best results. Promptness assured. WATSON E. COLEMAN, Patent Lawyer, 724 Ninth St., N. W., Washington, D. C.

FREE "PATENT PARTICULARS"
Sterling Buck, over 23 years Registered Patent Attorney. Prompt and thorough services. Suite M 629 F, Washington, D. C.

SEYMOUR & BRIGHT, Registered Patent Attorneys. Established 1876. PATENTS, TRADEMARKS, COPYRIGHTS. Prompt and thorough service. Suite 600-4, Barrister Building, Washington, D. C.

PATENTS—TRADEMARKS—COPYRIGHTS
Charlotte office convenient to South. PAUL B. EATON, Registered Patent Attorney, 218 Johnson Building, Charlotte, N. C., and 314 McLachlen Building, Washington, D. C.

EDWARD C. SASNETT, Atty. at Law, formerly a Principal Examiner in the U. S. Patent Office. I offer to inventors and manufacturers a strictly personal service based on twenty years' experience in patent work. McGill Building, Washington, D. C.

AGENCIES WANTED

SALES REPRESENTATIVE—Large and valuable acquaintance with foundries, stove manufacturers, coal mines and supply houses in entire South wishes immediate connection; salary or commission. Highest references. Address W. J. BACH, 1139 So. 14th Street, Birmingham, Ala.

FIRST-CLASS SALESMAN, 32 years old, 10 years' experience traveling Louisiana-Mississippi territory, past two years dist. sales mgr. for large Eastern company, would like 3 or 4 good lines as manufacturer's agent. Best acquainted hardware, mill supplies, engineering and steam specialties, but will consider any good lines. What have you? No. 9031, care Manufacturers Record.

REPRESENTATIVES WANTED

DEALERS WANTED to represent established incinerator company. Exclusive rights given in territories allotted. Address Economy Incinerator Co., Inc., Milwaukee, Wis.

EXCLUSIVE AGENCY

CONTRACTOR, Engineer or Lumber Company can build up attractive business by selling and erecting our nationally known line of roof structures. We wish to make connections in the Southern States, Kansas, Michigan, Wisconsin and the Dakotas. Address No. 9030, care Manufacturers Record.

SITUATIONS WANTED

GRADUATE MECHANICAL ENGINEER, with eleven years' experience in production of light and heavy steel stampings, deep drawn work and die design, seeks new connection; married. Address No. 9028, care of Manufacturers Record, Baltimore, Md.

MEN WANTED

IF YOU ARE OPEN to overtures for new connection and qualified for a salary between \$2500 and \$25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service, of recognized standards and reputation, through which preliminaries are negotiated confidentially for positions of the caliber indicated. The procedure is individualized to each client's personal requirements, your identity covered and present position protected. Established twenty years. Send only name and address for details.

R. W. BIXBY, INC.,
103 Downtown Bldg. Buffalo, New York

MACHINERY AND SUPPLIES

VALDURA PAINT

CLOSING OUT STOCK. Dealer will sacrifice for quick sale all or part 600 gallons Valdura Paint. First-class condition. Opportunity for great saving to dealers or users. Subject to prior sale. Address No. 9023, care of Manufacturers Record.

FOR SALE AT A BARGAIN—25 Horsepower Fairbanks-Morse single cylinder (Horizontal) Y-type, style H, 325 R.P.M. engine, with 22-in. direct drive friction clutch. Guaranteed 98% new. Gibbs Machine Co., Orlando, Fla.

MACHINERY AND SUPPLIES WANTED

WANTED—Good second-hand Turbine Water Wheel, size 10 in. to 13 in. horizontal type preferred, to operate under 75 ft. head, requiring 150 ft. piping. Could use Pelton impulse wheel of similar capacity. David T. Vance, Plumtree, N. C.



RESALE DEPARTMENT

MACHINERY

EQUIPMENT

SUPPLIES



BRIGGS & TURIVAS
Cleveland Ave., Zanesville, Ohio

Phone 349

Is Offering For Sale

COMPLETE TUBE MILL

Steel Buildings, and Equipment.

Write for their 36-Page Illustrated list.

Note the following selections from this Plant:

- 13—Overhead Traveling Cranes.
- 1000 KW Westinghouse Condensing Turbo Generator DC, 250 Volts.
- 500 KW Westinghouse Condensing Turbo Generator DC, 250 Volts.
- 1—Sturtevant Type "M" Economizer, 250 lb. pressure.
- 3—Forter Miller Gas Producers, Class D, 10'6" Dia. x 14' 11" high.
- Link Belt Coal Handling Equipment.

USED DIESEL ENGINES

- 40 HP Fairbanks, Morse with belted 30 KVA 1200 RPM 3 phase, 60 cycle, 2300 volt alternator-exciter-switch-board.
- 75 HP Fairbanks, Morse direct connected to 60 KVA 3 phase, 60 cycle, 2300 volt alternator-exciter-generator panel-maxim silencer.
- 60 HP Bessemer for belt drive.
- 180 HP Fairbanks, Morse for belt drive-Friction clutch pulley—complete equipment—can be arranged to drive generator.
- 240 HP Fairbanks, Morse, can be arranged for belt drive or direct connected generator drive.
- 10 HP Fairbanks, Morse semi-Diesel horizontal—complete equipment.

The above engines were traded in for larger equipment
All the above reasonably priced

FAIRBANKS, MORSE & CO.

115 E. Lombard Street,
BALTIMORE, MD.



RESALE DEPARTMENT

MACHINERY

EQUIPMENT

SUPPLIES

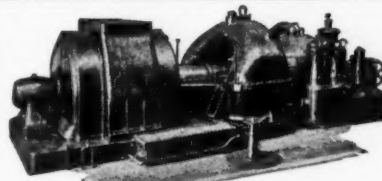


NEW FAIRBANKS-MORSE OIL ENGINE

15 H. P. Standard Type "V"
With complete standard equipment (except pulley)
1—Centrifugal circulating pump outfit.
1—42"x34" Cooling tank.
All brand new—never been used—immediately available. Write or wire
MOFFATT MACHINERY MANUFACTURING CO.
Charlotte, N. C.

Conveyor, Elevators and Boiler FOR SALE

Complete roller conveyor, 500 ft. long.
2—Economy Portable Elevators 2000. lbs. Capacity.
1—Ward Marine Boiler, 300 lbs. Pressure.
Maryland Pipe & Steel Corp.
Ostend and Scott Sts., Baltimore, Md.
Phone: South 0221



10,000 KVA Turbo typical of 4 units recently delivered and similar to the following.

PRACTICALLY NEW 100% INTERNAL EXCELLENCE WESTINGHOUSE CONDENSING TURBO UNITS COMPLETE—INSTANT SHIPMENT

1—15,000 KW CW-218 Frame—1800 RPM
1—10,000 KVA CW-118 Frame—1800 RPM
1—7,500 KW CW-78 Frame—1800 RPM
1—5,500 KVA CW-76 Frame—3600 RPM
1—4,000 KVA CW-76 Frame—3600 RPM
2—1,700 KVA CW-26 Frame—3600 RPM
1—1,500 KVA CW-16 Frame—3600 RPM
(3 phase, 60 cycle, standard voltages)

A.S.M.E. CODE DESIGN BOILERS 200-225 lbs.

2—1500 H.P. Cross Drum B & W
2—2650 HP Ladd Bent Tube
5—627 HP Stirling Plant, modern stokers, auxiliaries
8—504 HP B & W Vertical Steel headers, et al.

CONDENSERS MOTOR GENERATOR SETS

Verification and proof of new equivalent condition easily reached on personal inspection
50% to 200% saving on investment

Send us list of your requirements—or what you have for sale

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Low Cost Long Life UNEXCELLED SERVICE



Three strong factors that have kept Gregory HI-GRADE-REBUILT MOTORS and Electrical Machinery in the lead since 1893.

Before buying consult Gregory's 80-page illustrated Monthly Bargain Sheet. It will save you Money, Time and Worry. Thousands of buyers have proved to their own satisfaction and profit that it pays to buy

GREGORY HI-GRADE-REBUILT Electrical Machinery

Write, phone or wire



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FOR SALE

3—Steel storage tanks 18' diam., 18' deep, 3/4" plate with conical covers.
1—36" Carver Perfection Huller.
1—Set Buckeye High & Low Pressure Accumulators.

All in first class condition and priced very reasonable. Address

L. R. CAMP, Engineer
815 Watts Bldg., Birmingham, Alabama

FOR SALE

1—Westinghouse Type CCL Induction Motor—20 HP—2200 Volts—3 phase —60 cycle—1140 RPM.

1—P.H. & F.M. Roots Co. Rotary Pressure Blower Style 1.

1—Stilwell-Bierce & Smith-Vaile Co. Plunger Pump size 9x10.

1—General Electric Induction Motor—Type 1—Form L—60 cycles—75 HP —2080 Volts—20 amperes.

Will sell above together or separately.

City of Rock Hill

City Manager Rock Hill, S. C.

RANDLE

OFFERS BIG BARGAINS IN

Used and Rebuilt Engine Generator Sets, Turbine Generator Sets, Motors, Rotary Converters, Generators, Motor Generator Sets, Engines, Boilers, Steam and Electric Machinery of all kinds, also Machine Tools. Send for our new machinery list. Yours for the asking. Established 50 years

The RANDLE MACHINERY CO.

1734 Powers St., Cincinnati, Ohio

Second Hand and New Wrought Iron

PIPE

Overhauled Rethreaded and Coupled

Also Cut to Sketch

Greenpoint Iron & Pipe Co., Inc.

187-197 Maspeth Ave. Brooklyn, N. Y.

PIPE

Rethreaded, reconditioned, guaranteed, suitable for all practical purposes, furnished with new threads and couplings, 400,000 feet in all sizes from 24" to 3/4".

Also large stock of spiral pipe, sizes 7", 10", 12", 14", 20" and 24".

Large stock of valves and fittings, screwed and flanged. Can make attractive prices.

MARINE METAL & SUPPLY CO.

167 South St., New York City

IRON AND STEEL PIPE

Large quantity new and used Government material in excellent condition, ready for immediate shipment. Low prices.

CENTRAL PIPE & SUPPLY CO.
Box 1099 Charleston, W. Va.

PIPE NEW SECOND HAND

Overhauled and Tested
New Threads and Couplings
Established 1904

Albert & Davidson Pipe Corp.

Second Ave., 50th-51st St., Brooklyn, N.Y.
Telephone Sunset 1900

Someone Can Use that
MACHINERY
YOU HAVE IN STORAGE

Increase your bank deposit and help out the other fellow.
Used machinery advertised in the

RESALE DEPARTMENT

will tell our readers about it.

Manufacturers Record
Baltimore, Md.

SATISFACTION

ALBERT PIPE SUPPLY CO., INC.

NEW-RECLAIMED-USED

PIPE

ALL SIZES CUT TO SKETCH AND STOCKED

BERRY & NORTH 13th STS. BROOKLYN, N.Y.

GUARANTEED

SERVICE

PRICES

8" Galvanized Corrugated Pipe

6000 ft. 8" NEW GALVANIZED CORRUGATED pipe in lengths 16 to 20 ft. suitable for exhaust drains, water systems, sewers, etc. Have the necessary connecting sleeves. Price considerably under the market.

2000 ft. 12" Naylor black asphalted spiral welded slip joint pipe, slightly used.

MARINE METAL & SUPPLY CO.

167 South Street New York City

TRANSFORMERS

—And Nothing Else—

That's why we can offer real quality at low prices. We serve many big public utility companies.

We are exclusively TRANSFORMER specialists. We handle nothing else.
We sell, buy, and repair and maintain TRANSFORMERS only.



The **ELECTRIC SERVICE CO. Inc.**
America's Used Transformer Clearing House
212 Walnut Street
Cincinnati, Ohio



We buy modern type transformers—any size—any quantity.
Wanted especially—high voltage large capacity transformers in carload shipments.

BOILERS

- 2—500 H. P. Heine Water Tube, 160 lbs. Pressure, A. S. M. E. code.
- 2—180 H. P. Keeler Water Tube, 200 lbs. Pressure, A. S. M. E. code.
- 1—150 H. P. 72" x 18' Hor. Ret. Tubular, 150 lb. pressure, A. S. M. E. code.

GENERATOR SETS

- 2—50 KVA 220 volt, 3 phase, 60 cycle Ridgeway Generators, direct connected to Ridgeway Engines.

METAL WORKING TOOLS

- 25" x 12' LeBlond heavy duty, belt drive quick change.
- 20" x 21' Lodge & Shipley lathe, belt drive quick change gear.
- 19" x 8' Sidney heavy duty, belt drive, quick change gear.
- No. 1 Kemp Smith Universal miller, single pulley drive, table 35½x8½.
- No. 4 Hillis & Jones single end punch belt drive, 36" throat, cap. 1¼" x 1".
- No. 3 Southwark single end punch, 24" throat arch jaw, motor drive, cap. ¾" x ¾".
- No. 1 Gray sheet metal cutter, belt drive, 34" throat cap. 3/16" material.
- 1½" Landis belt cutter belt drive.
- 2" Acme belt cutter belt drive.

THE O'BRIEN MACHINERY CO.
113 North Third Street
Philadelphia, Pa.

Reach the Buyers

of used machinery and equipment through the

Resale Department

An advertisement in this department will help sell machinery being replaced or no longer needed in your plant.

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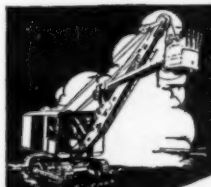
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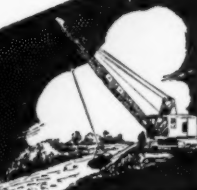
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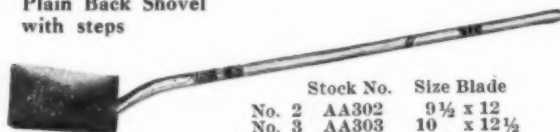
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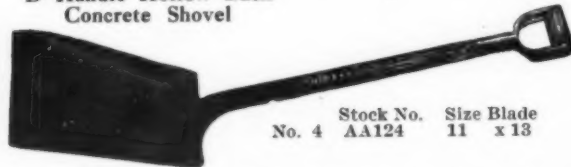
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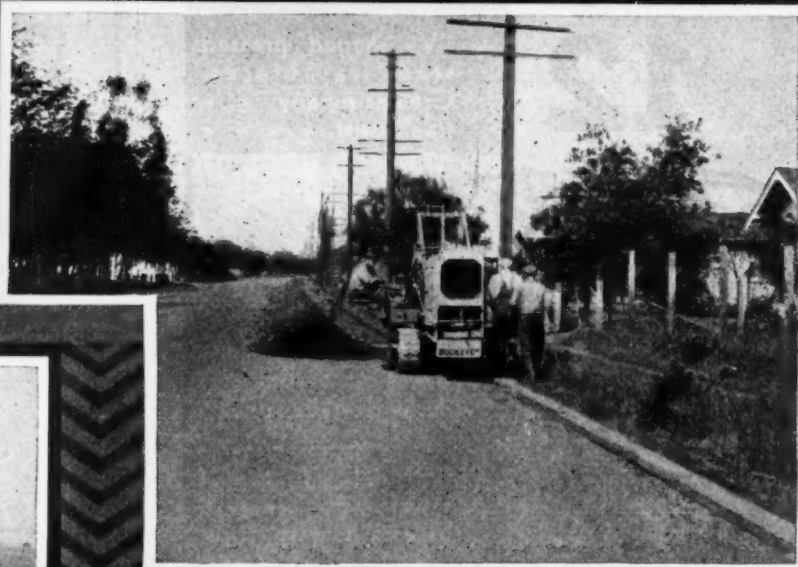
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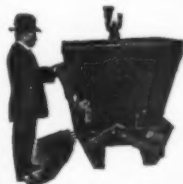
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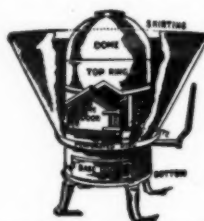
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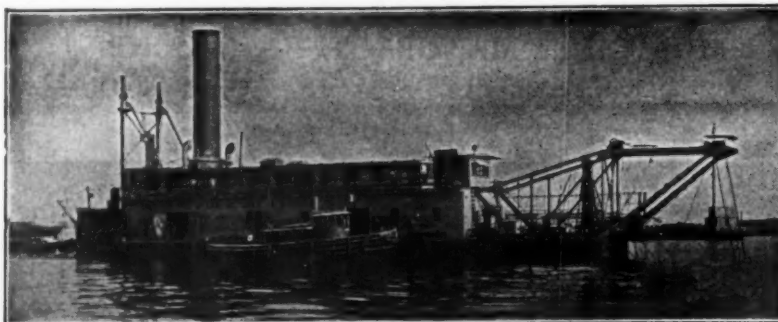
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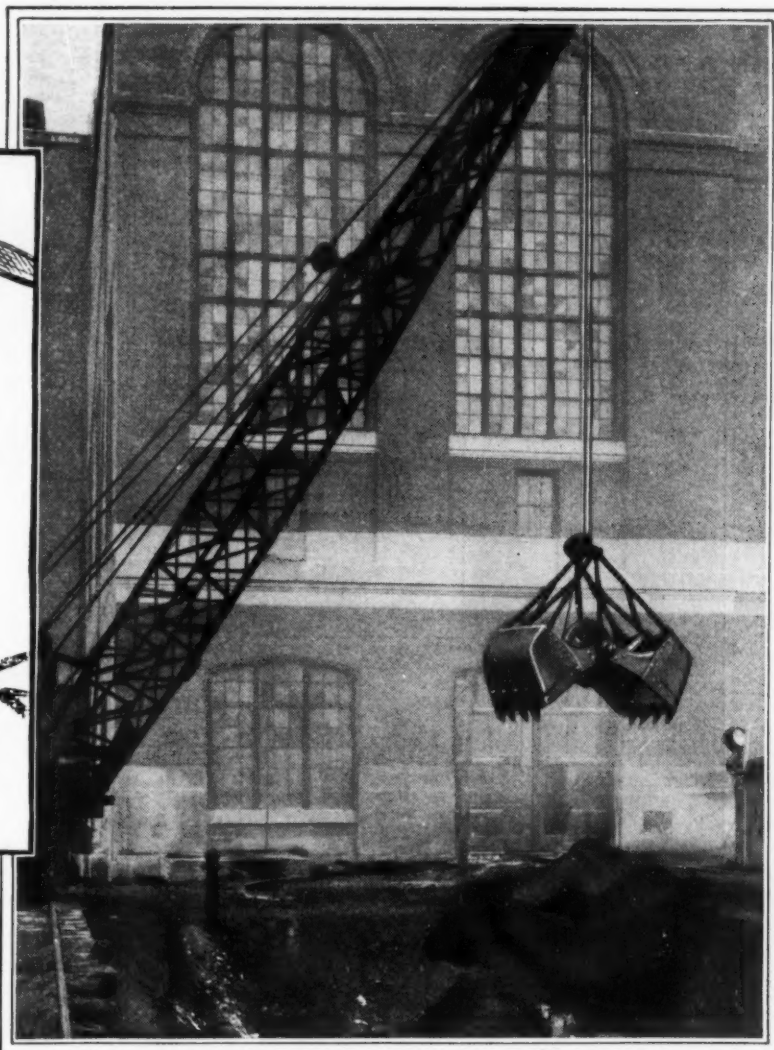


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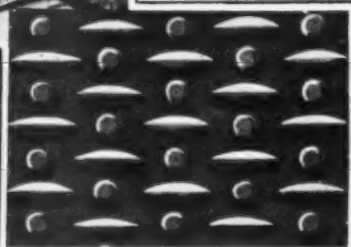
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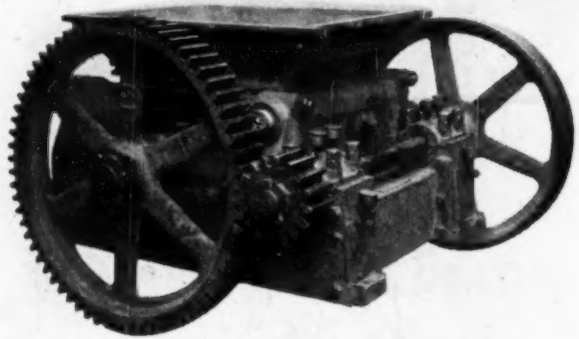
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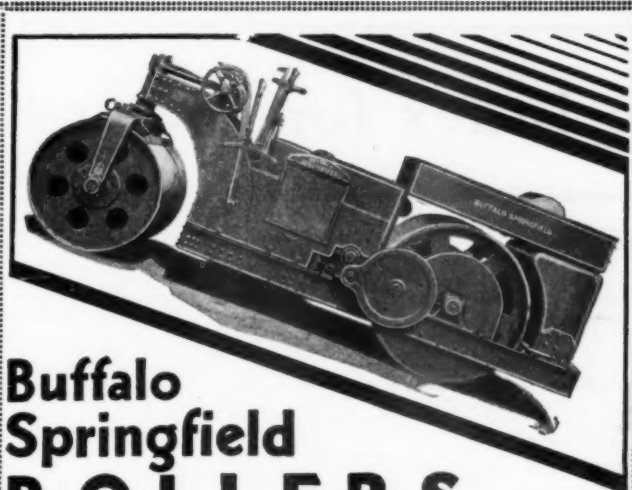
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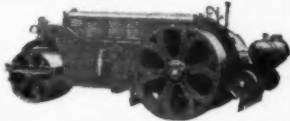
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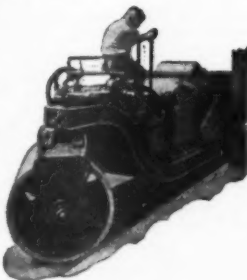
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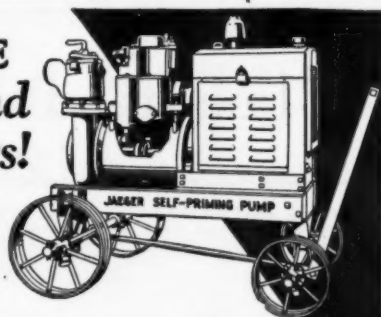
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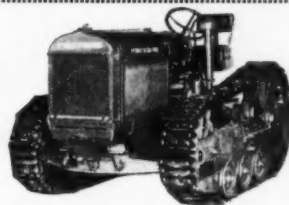
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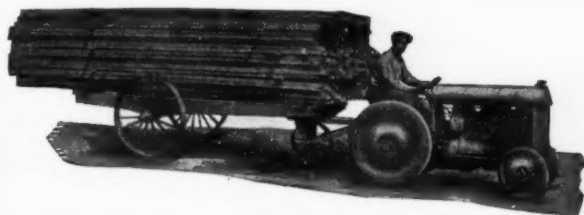


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Bond, Geo. Harwell, Atlanta, Ga.
Chase, Wm. J. J., Atlanta.
Landsley, Claude H., Jackson, Miss.
Main, Inc., Chas. T., Boston, Mass.
Milburn, Helster & Co., Wash., D. C.
Meyer Co., Tilghman, Allentown, Pa.
Simmons, Inc. & Associates, B. Stanley, Washington, D. C.
Prosser & Co., Inc., G. Lloyd, Atlanta.
Stirling & Co., J. E., Greenville, S. C.
Wheeler, Walter H., Minneapolis, Minn.
Widner Engineering Co., St. Louis, Mo.

—(Golf Course, Landscape.)

Draper, E. S., Charlotte, N. C.
Miller & Assn., Wendell F., Columbus, O.
Spoon & Lewis, Greensboro, N. C.

ARCHITECTS' SUPPLIES.

Weber Co., Inc., F., Philadelphia, Pa.

ARCHITECTURAL BRONZE.

Chase Brass & Copper Co., Waterbury, Conn.

—Iron Work.

Dietrich Brothers, Baltimore, Md.
Virginia Bridge & Iron Co., Roanoke, Va.

ASH Removal Systems (Gates, Hoppers, Quenchers, etc.)

Allen-Sherman-Hoff Co., Phila., Pa.

—Sulcing Systems.

Allen-Sherman-Hoff Co., Phila., Pa.

—Storage Tanks (Cast Iron.)

Allen-Sherman-Hoff Co., Phila., Pa.

ASPHALT.

Gulf Refining Co., Pittsburgh, Pa.

—Filler.

American Limestone Co., Knoxville, Tenn.
Serviced Pre-moulded Products, Inc., Chicago, Ill.

AUDITORS.

Black & Co., Baltimore, Md.
Ernst & Ernst, New York, N. Y.
Hollowell Gorham & Co., Greenboro, N. C.
Le Baron, E. T., Jacksonville, Fla.

BABBITT METAL.

Ryerson & Sons, Inc., Jos. T., St. Louis and New York.

BACKFILLERS.

Austin Machinery Corp., Muskegon, Mich.
Buckeye Traction Ditcher Co., Findlay, O.
Harnischfeger Corp., Milwaukee, Wis.
National Equipment Corp. (Inslay, Parsons), Milwaukee, Wis.

BALLAST (Railroad.)

American Limestone Co., Knoxville, Tenn.

BANKERS and BROKERS.

Provident Savings Bank & Trust Co., Cincinnati, Ohio.
Taylor, Wilson & Co., Inc., Cincinnati, Ohio.

BANKS and TRUST COMPANIES.

Baltimore Commercial Bank, Balto., Md.
Bank of Alabama, The, Enley, Ala.
Bank of New York & Trust Co., N. Y.
First and Merchants National Bank, Richmond, Va.
Maryland Trust Co., Baltimore, Md.
Mercantile Trust Co., Baltimore, Md.

BARGES (Steel.)

American Bridge Co., New York, N. Y.
McClintic-Marshall Co., Pittsburgh, Pa.

BARB (Steel, Rounds, Flats, Hexagon and Squares.)

Carnegie Steel Co., Pittsburgh, Pa.
Conners Steel Co., Birmingham, Ala.
Gulf States Steel Co., Birmingham, Ala.
Knoxville Iron Co., Knoxville, Tenn.
Republic Steel Corp., Youngstown, Ohio.
Ryerson & Son, Inc., Jos. T., St. Louis, and New York.
Sweet's Steel Corp., Williamsport, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Timken Roller Bearing Co., Canton, Ohio.
Virginia Bridge & Iron Co., Roanoke, Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

BATTERIES (Storage.)

Electric Storage Battery Co., Phila., Pa.

BEAMS, CHANNELS, ANGLES.

Belmont Iron Works, Philadelphia, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.

BEARINGS (Anti-friction.)

Hyatt Roller Bearing Co., Newark, N. J.
Timken Roller Bearing Co., Canton, Ohio.

—(Line Shaft.)

Wood's Sons Co., T. B., Chambersburg, Pa.

—(Roller.)

Hyatt Roller Bearing Co., Newark, N. J.
Timken Roller Bearing Co., Canton, Ohio.

BELT (Chain.)

Diamond Chain & Mfg. Co., Indianapolis.

Morse Chain Co., Ithaca, N. Y.

—(Leather, Canvas, Rubber.)

Charlotte Leather Belting Co., Charlotte, N. C.

Republic Rubber Co., Youngstown, Ohio.

—Dressing.

Dixon Crucible Co., Jos., Jersey City, N. J.

—Conveyors.

Barber-Greene Co., Aurora, Ill.

BENCH LEGS.

Angle Steel Stool Co., Plainwell, Mich.

—Drawers (Steel.)

Angle Steel Stool Co., Plainwell, Mich.

BENCHES AND TABLES.

Angle Steel Stool Co., Plainwell, Mich.

BILLETS (Basic Open Hearth.)

Gulf States Steel Co., Birmingham, Ala.
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Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

BINS (Drill and Reamer.)

Angle Steel Stool Co., Plainwell, Mich.

—(Steel Loading.)

Blaw-Knox Co., Pittsburgh, Pa.

BLASTING POWDER and Accessories.

Du Pont de Nemours & Co., E. I., Wilmington, Del.
Hercules Powder Co., Inc., Wilmington, Del.

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Wilson Corp., The J. G., New York.

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Charleston Dry Dock & Machine Co., Charleston, S. C.
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Combustion Engr. Corp., New York, N. Y.
Hedges Walsh Weldner Co., Chattanooga, Tenn.
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Schofield's Sons Co., J. S., Macon, Ga.
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Harbison-Walker Refractories Co., Pittsburg.

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Republic Steel Corp., Youngstown, Ohio.
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Virginia Bridge & Iron Co., Roanoke, Va.

—(Track.)

Sweet's Steel Co., Williamsport, Pa.

BOND BUYERS.

Garraway & Co., S. G., Chicago.
Handsett Bond Co., Inc., The, Chicago.
Law & Co., A. M., Spartanburg, S. C.
Marx & Co., Birmingham, Ala.
Mercantile Trust Co., Baltimore, Md.
Nuven & Co., John, Chicago, Ill.
Provident Savings Bank and Trust Co., Cincinnati, Ohio.

Seasongood & Mayer, Cincinnati, Ohio.
Taylor, Wilson & Co., Inc., Cincinnati, Ohio.

BORING (Core.)

Mott Core Drilling Co., Huntington, W. Va.
Pennsylvania Drilling Co., Pittsburgh, Pa.
Southern Drilling Co., Saltville, Va.
Sprague & Henwood, Inc., Scranton, Pa.

BOXES (Paper.)

Old Dominion Box Co., Lynchburg, Va.

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Chase Brass & Copper Co., Waterbury, Conn.
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Mueller Co., Decatur, Ill.

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—(Face.)

Alabama Clay Prod. Co., Birmingham.

—(Fire.)

Alabama Clay Prod. Co., Birmingham.
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Dee Co., Wm. E., Oak Hill, Ohio.
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—(Vitified, Paving.)

National Paving Brick Mfrs. Assn., Washington, D. C.

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Kirby Lumber Co., Houston, Texas.

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—(Crescoted Wood.)

Atlantic Bridge Co., Greensboro, N. C.

—(Steel.)

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Atlantic Bridge Co., Greensboro, N. C.
Belmont Iron Works, Philadelphia, Pa.
Bristol Steel & Iron Works, Inc., Bristol, Va.
Champion Bridge Co., Wilmington, O.
Converse Bridge & Steel Co., Chattanooga, Tenn.
Ingalls Iron Works Co., Birmingham, Ala.
McClintic-Marshall Co., Pittsburgh, Pa.
Nashville Bridge Co., Nashville, Tenn.
Richmond Struct. Steel Co., Richmond, Va.
Virginia Bridge & Iron Co., Roanoke, Va.

BRONZE (Architectural.)

Heath Company, J. S., Waukegan, Ill.

—(Machine.)

Moccasin Brushing Co., Chattanooga, Tenn.

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Rundie-Spence Mfg. Co., Milwaukee, Wis.
Taylor Co., Halsey W., Warren, Ohio.

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Kiesler Co., Jos. F., Chicago, Ill.
Owen Bucket Co., The, Cleveland, Ohio.
Stuebner Iron Works, G. L., Long Island City, N. Y.

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Monaghan Mfg. Corp., Chicago, Ill.
Kiesler Co., Jos. F., Chicago, Ill.
Owen Bucket Co., The, Cleveland, Ohio.
Stuebner Iron Works, G. L., Long Island City, N. Y.

—(Elevator.)

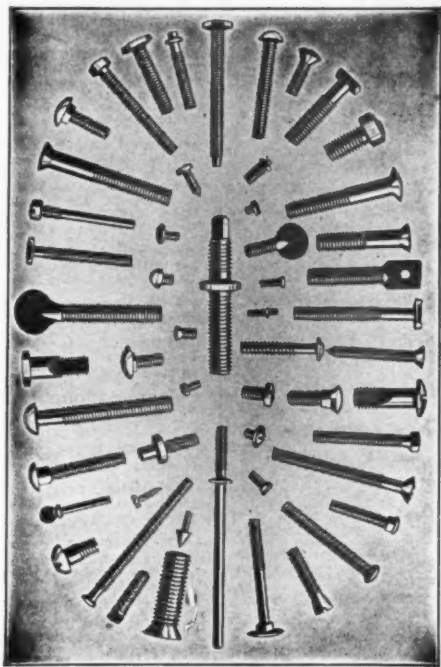
Hendrick Mfg. Co., Carbondale, Pa.
Webster & Waller Mfg. Companies, Chicago, Ill.

—(Orange Peel.)

Hayward Co., The, New York, N. Y.

—(Ore Handling.)

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White Engineering Corp., J. G., New York

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Blaw-Knox Co., Pittsburgh, Pa.
Braden Steel Corp., Tulsa, Okla.
Butler Mfg. Co., Kansas City, Mo.
Maryland Metal Building Co., Balto., Md.
McClintic-Marshall Co., Pittsburgh, Pa.
Nashville Bridge Co., Nashville, Tenn.
Truscon Steel Co., Youngstown, Ohio.
Virginia Bridge & Iron Co., Roanoke, Va.

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Maryland Metal Building Co., Balto., Md.

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Western Electric Co., New York City.

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—Pullers.
Webster & Weller Mfg. Companies, Chicago, Ill.

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Koppel Ind. Car & Equip. Co., Koppel, Pa.
Southern Iron & Equipment Co., Atlanta.

—Steps (Safety.)
Irving Iron Works Co., Long Island City, N. Y.

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Inter-State Fdry. & Mach. Wks., Johnson City, Tenn.
Moccasin Bushing Co., Chattanooga, Tenn.
Mountain States Steel Foundries, Parkersburg, W. Va.

—(Chilled Iron.)
Fuller Lehigh Co., Fullerton, Penna.

—(Gray Iron.)
Fuller Lehigh Co., Fullerton, Penna.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.
Inter-State Fdry. & Mach. Wks., Johnson City, Tenn.
National Cast Iron Pipe Co., Birmingham, Ala.
Roanoke Iron & Bridge Works, Inc., Roanoke, Va.
Salem Fdry. & Mach. Wks., Salem, Va.
U. S. Pipe & Foundry Co., Burlington, N. J.

—(Malleable Iron and Steel.)
Timken Roller Bearing Co., Canton, O.

—(Semi-Steel.)
Salem Fdry. & Machine Works, Salem, Va.

—(Steel.)
Bethlehem Steel Co., Bethlehem, Pa.
Crucible Steel Casting Co., Lansdowne, Delaware Co., Pa.
Deemer Steel Casting Co., New Castle, Del.
Lunkenheimer Co., Cincinnati, Ohio.

CAUSTICIZERS.
Swenson Evaporator Co., Harvey, Ill.

CEILINGS (Metal.)
Milcor Steel Co., Milwaukee, Wis.

CEMENT (High Temperature.)
Harrison Walker Refractories Co., Pittsburg.

—(Portland.)
Alpha Portland Cement Corp., Birmingham, Ala.
Lehigh Portland Cement Co., New York.
Louisville Cement Co., Louisville, Ky.
Portland Cement Assn., Chicago, Ill.

—Guns.
Cement-Gun Co., Inc., Allentown, Pa.

—Machinery.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.

CHAIN BLOCKS (See Blocks, Chain.)

CHAINS (Dredge, Quarry, Steam Shovel.)
Knoxville Iron Co., Knoxville, Tenn.
Woodhouse Chain Works, Trenton, N. J.

—(High Speed Roller.)
Diamond Chain & Mfg. Co., Indianapolis

—(Silent Drive.)
Diamond Chain & Mfg. Co., Indianapolis.
Morse Chain Co., Ithaca, N. Y.

—(Sprocket.)
Chain Belt Co., Milwaukee, Wis.
Diamond Chain & Mfg. Co., Indianapolis.
Morse Chain Co., Ithaca, N. Y.

—(Welded.)
Woodhouse Chain Works, Trenton, N. J.

CHAIRS (Opera and Theatre.)
Andrews Co., A. H., Chicago, Ill.

—and Stools (Steel.)
Angle Steel Stool Co., Plainwell, Mich.

CHEMICAL MACHINERY.
Swenson Evaporator Co., Harvey, Ill.

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CHEMISTS, CHEMICAL ENGINEERS (Analytical.)

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Flood & Co., Walter H., Chicago, Ill.
Froehling & Robertson, Inc., Richmond, Va.
Hunt Co., Robert W., Chicago, Ill.
Meigs, Bassett & Slaughter, Phila., Pa.
Pisard Laboratories, The, Birmingham, Ala.
Pittsburgh Testing Laboratories, Pittsburgh, Pa.
Southwestern Laboratories, Fort Worth, Texas.
Stillman & Van Selen, New York.
Wiley & Co., Inc., Baltimore, Md.

—(Consulting, Paper Industry.)
Froehling & Robertson, Inc., Richmond, Va.

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Rust Engineering Co., Birmingham, Ala.

—(Radial Brick.)
Rust Engineering Co., Birmingham, Ala.

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Electric Storage Battery Co., Phila., Pa.

CHLORINATORS.
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Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

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Ludlow Engineers, Winston-Salem, N. C.

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Davis-Paradis Watchman's Clock Corp., New York, N. Y.
Kaiser Klock Co., L. E., Baltimore, Md.

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Caldwell Co., Inc., W. E., Louisville, Ky.
Schultz & Son, A. L., Chicago, Ill.
Wood's Sons Co., T. B., Chambersburg, Pa.

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Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

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Hayward Co., The, New York, N. Y.
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Northwest Engineering Co., Chicago.
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Webster & Weller Mfg. Companies, Chicago, Ill.

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Allen-Sherman-Hoff Co., Phila., Pa.

—Tipples.
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Virginia Bridge & Iron Co., Roanoke, Va.

COCKS (Service.)
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COKE.
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Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

COLUMNS (Cast Iron.)
U. S. Pipe & Foundry Co., Burlington, N. J.

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—Information Only.
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Dunning & Boschert Press Co., Inc., Syracuse, N. Y.
Jaeger Machine Co., Columbus, Ohio.
Lansing Co., Lansing, Mich.

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National Equipment Corp. (Insley Division), Milwaukee, Wis.

—Road Curing.
McEverist, Inc., Los Angeles, Cal.

—Roofing Tile.
American Cement Tile Mfg. Co., Pittsburgh, Pa.

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Chicago Pneumatic Tool Co., New York.
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Manistee Iron Works Co., Manistee, Mich.
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Union Steam Pump Co., Battle Creek, Mich.
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Atlantic Gulf and Pacific Co., New York.

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Walker Electrical Co., Atlanta, Ga.
Warner Service Co., Knoxville, Tenn.
Webb Electric Co., Anderson, S. C.

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Snare Corp., Frederick, New York, N. Y.

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Snare Corp., Frederick, New York, N. Y.
Stone & Webster, Inc., Boston, Mass.
Thompson & Bros., T. C., Charlotte, N. C.
Tucker & Laxton, Charlotte, N. C.
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Jennings & Co., Floyd, Atlanta, Ga.

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Poe Piping & Heating Co., Greenville, S. C.

—(Power Plants.)
Snare Corp., Frederick, New York, N. Y.

—(Railroad.)
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Cornell-Young Co., Inc., Macon, Ga.

—(Reinforced Concrete.)
Blair, Algernon, Montgomery, Ala.
Cement Gun Construction Co., Chicago.
Gunite Cons. & Constr. Co., Kansas City.
Tucker & Laxton, Charlotte, N. C.

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—(Sewerage and Waterworks.)
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Hardaway Contracting Co., Columbus, Ga.
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McCrary Co., The J. B., Atlanta, Ga.
Snare Corp., Frederick, New York, N. Y.
Tucker & Laxton, Charlotte, N. C.

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—(Swimming Pool.)
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—(Water-Works.)
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

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(Used.)
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Cohen, Chas. F., Lima, O.
Elphinstone Inc., D. C., Baltimore, Md.
Equip. Sales & Rentals Co., Pittsburgh.
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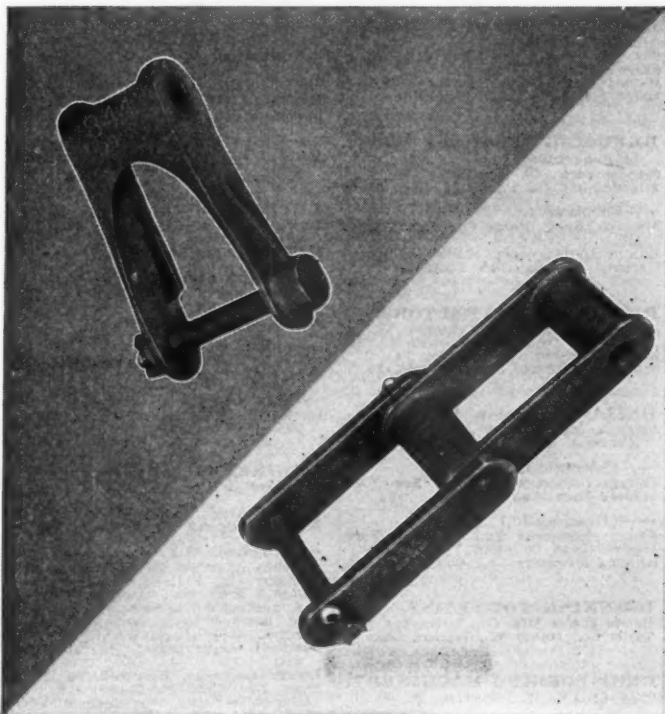
Stephens-Adams Mfg. Co., Birmingham, Ala.
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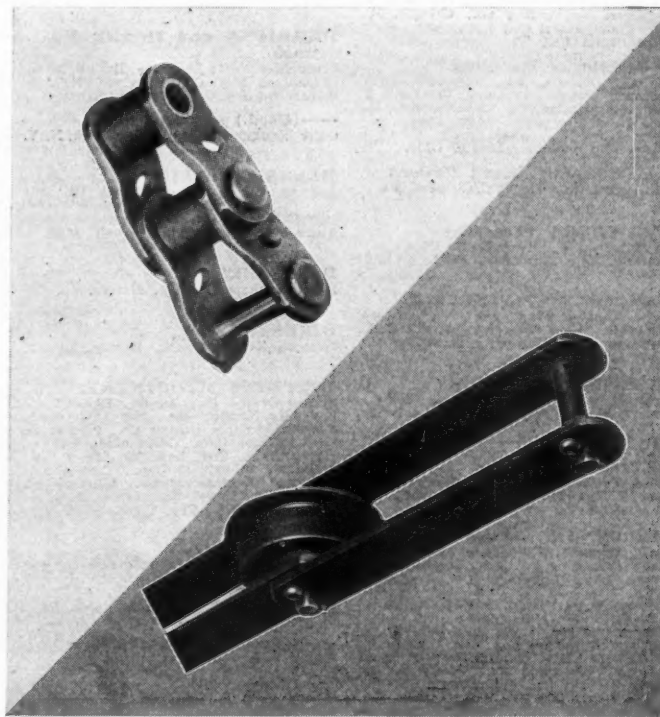
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Battley & Kipp, Inc., Chicago, Ill.
Fay, Spofford & Thorndike, Boston, Mass.
Freeland, Roberts & Co., Nashville, Tenn.
Gardner & Howe, Memphis, Tenn.
Greiner & Co., J. E., Baltimore, Md.
Lockwood Greene Engrs., Inc., New York City.
Main, Inc., Chas. T., Boston, Mass.
Steel & Leiby, Knoxville, Tenn.
Tucker & Laxton, Charlotte, N. C.
Turner, C. A. P., Minneapolis, Minn.
Wheeler, Walter H., Minneapolis, Minn.
- (Research and Development.)
Invicta Engineering Co., Birmingham, Ala.
- (Sanitary.)
Harza Engineering Co., Chicago.
- (Sewage Disposal Plants.)
Fuller & McClintock, New York, N. Y.
Ludlow Engineers, Winston-Salem, N. C.
McCrary Co., The J. B., Atlanta, Ga.
Platt, William M., Durham, N. C.
Wiedeman and Singleton, Inc., Atlanta.
- (Sewerage and Waterworks.)
Conard & Busby, Burlington, N. J.
Consoer, Older & Quinlan, Inc., Chicago.
Ford, Bacon & Davis, Inc., New York.
Fuller & McClintock, New York, N. Y.
Hardaway Contracting Co., Columbus, Ga.
Harrub Engr. Co., C. N., Nashville, Tenn.
Hills Co., George B., Jacksonville, Fla.
Howerton Engineering Co., Asheville, N. C.
Knowles, Inc., Morris, Pittsburgh, Pa.
Ludlow Engineers, Winston-Salem, N. C.
Mees & Mees, Charlotte, N. C.
Platt, William M., Durham, N. C.
Sanderson & Porter, New York, N. Y.
Spoon & Lewis, Greensboro, N. C.
Tucker & Laxton, Charlotte, N. C.
White Co., Gilbert C., Durham, N. C.
White Engineering Corp., J. G., New York.
- (Structural.)
Freeland, Roberts & Co., Nashville, Tenn.
Hedrick, Inc., Ira G., Hot Springs Nat'l. Park, Ark.
Hills Company, Geo. B., Jacksonville, Fla.
Lockwood Greene Engrs., Inc., New York City.
Simmons, Inc. & Associates, B. Stanley, Washington, D. C.
Turner, C. A. P., Minneapolis, Minn.
Virginia Bridge & Iron Co., Roanoke, Va.
- (Textile Mills.)
Ballinger Co., Philadelphia, Pa.
Lockwood Greene Engrs., Inc., New York City.
- (Transmission Lines.)
Hoosier Engineering Co., Chicago, Ill.
- (Ventilating and Heating.)
Biggs Eng. Co., W. E., Knoxville, Tenn.
Wiley & Wilson, Lynchburg, Va.
- (Water Supply.)
Floyd & Lochridge, Dallas, Texas.
- (Engines (Compressed Air).)
Dake Engine Co., Grand Haven, Mich.
- (Diesel Type.)
Fairbanks, Morse & Co., Chicago, Ill.
- (Gas and Gasoline.)
Light Mfg. & Fdry. Co., Pottstown, Pa.
Nove Engine Co., Lansing, Mich.
Sterling Engine Co., Buffalo, N. Y.
Wisconsin Motors Co., Milwaukee, Wis.
- (Gas and Oil.)
Chicago Pneumatic Tool Co., New York.
- (Hoisting.)
Clyde Iron Works Sales Co., Duluth, Minn.
Mundy Hoisting Engine Co., J. S., Newark, N. J.
- (Marine.)
Fairbanks, Morse & Co., Chicago, Ill.
- (Oil.)
Ingersoll-Rand Co., New York, N. Y.
Continental Oil Co., Birmingham, Ala.
- (Steam.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Cole Mfg. Co., R. D., Newman, Ga.
Lefel & Co., The James, Springfield, O.
Lombard Iron Works & Supply Co., Augusta, Ga.
Morris Machine Works, Baldwinville, N. Y.
Schotfield's Sons Co., J. B., Macon, Ga.
- (Envelopes.)
Young & Seldon Co., Baltimore, Md.
- (Estimators (Building & Construction).)
Spring, Charles Herbert, Greensboro, N. C.
- (Excavating Machinery.)
Bay City Shovel, Inc., Bay City, Mich.
Buckeye Traction Ditcher Co., Findlay, O.
Bucyrus-Erie Co., Erie, Penna.
Clyde Iron Works Sales Co., Duluth, Minn.
Harnischfeger Corp., Milwaukee, Wis.
Hayward Co., The, New York, N. Y.
Industrial Brownhoist Corp., Cleveland.
Monaghan Mfg. Corp., Chicago, Ill.
National Equipment Corp. (Koebring, Insley, Parsons), Milwaukee, Wis.
Northwest Engineering Co., Chicago, Ill.
Owen Bucket Co., The, Cleveland, Ohio.
Thew Shovel Co., The, Lorain, Ohio.
Universal Power Shovel Co., Milwaukee, Wis.
- (Excavators (Clamshell and Orange Peel).)
Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.
Thew Shovel Co., Lorain, Ohio.
- (Dragline. See Dragline Excavators.)
- (Trench.)
Barber-Greene Co., Aurora, Ill.
Bay City Shovel, Inc., Bay City, Mich.
Buckeye Traction Ditcher Co., Findlay, O.
Bucyrus-Erie Co., Erie, Penna.
Harnischfeger Corp., Milwaukee, Wis.
Hayward Co., The, New York, N. Y.
Monaghan Mfg. Corp., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.
Universal Power Shovel Co., Milwaukee, Wis.
- (Exhaust Fans (See Blowers and Exhaust Fans).)
—Systems (See Blowers and Exhaust Fans.)
- (Expansion Joints (Road and Street).)
Serviced Premoulded Products, Inc., Chicago, Ill.
- (Explosives.)
Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Hercules Powder Co., Inc., Wilmington, Del.
- (Factory Management Systems.)
Ernst & Ernst, New York, N. Y.
- (Fans, Exhaust (See Blowers and Exhaust Fans).)
- (Feed-Water Heaters and Purifiers.)
American Water Softener Co., Phila., Pa.
- (Fence Posts (Cresceted).)
Ayer & Lord Tie Co., Chicago, Ill.
- (Fencing Entrance Gates (Iron, Steel and Wire).)
American Steel and Wire Co., Balto., Md.
Anchor Post Fence Co., Baltimore, Md.
Cyclone Fence Co., Waukegan, Ill.
Page Fence Association, Chicago, Ill.
Stewart Iron Works Co., Cincinnati, O.
- (Field and Industrial, Wire Woven.)
American Steel and Wire Co., Balto., Md.
Anchor Post Fence Co., Baltimore, Md.
Cyclone Fence Co., Waukegan, Ill.
Gulf States Steel Co., Birmingham, Ala.
Page Fence Association, Chicago, Ill.
Stewart Iron Works Co., Cincinnati, O.
- (Fertilizer Machinery.)
Raymond Bros., Impact Pulv. Co., Chicago.
- (Filter (For Domestic and Industrial Purposes).)
American Water Softener Co., Phila., Pa.
International Filter Co., Chicago, Ill.
Rees, S. P., Atlanta.
Roberts Filter Mfg. Co., Darby (Phila.), Pa.
Seale & Sons Co., Wm. B., Oakmont, Pa.
- (Financing.)
Akers, William, Atlanta, Ga.
Electric Bond & Share Co., New York.
Garraway & Co., S. G., Chicago.
Gay & Co., W. O., New York, N. Y.
Marx & Co., Birmingham, Ala.
- (Fire Clay.)
Alabama Clay Products Co., Birmingham.
Cambria Clay Products Co., Blackfork, O.
- (Fire Extinguishers.)
Myers & Bro. Co., The F. E., Ashland, O.
- (Fireproof Building Material.)
Bannon Pipe Co., Louisville, Ky.
Robertson Co., H. H., Pittsburgh.
- (Doors and Shutters.)
Kinnear Mfg. Co., The, Columbus, Ohio.
Mahon Co., R. C., Detroit, Mich.
Moeschl-Edwards Corr. Co., Cincinnati, O.
Richards-Wilcox Mfg. Co., Aurora, Ill.
- (Fittings (Wire Rope).)
Leschen & Sons Rope Co., A., St. Louis.
- (Flanges (Iron and Steel).)
Amer. Cast Iron Pipe Co., Birmingham.
Dart Mfg. Co., E. M., Providence, R. I.

National Cast Iron Pipe Co., Birmingham, Ala.
Taylor Forge & Pipe Wks., Chicago, Ill.
U. S. Pipe & Foundry Co., Burlington, N. J.
Vogt Mch. Co., Henry, Louisville, Ky.
—and Flanged Fittings.
Grinnell Co., Inc., Providence, R. I.

FLOOR. (Asphalt Plank.)
Serviced Premeasured Products, Inc., Chicago, Ill.

—(Composition.)
Johns-Manville Corp., New York, N. Y.

—(Cork Composition.)
Congoleum-Nairn, Inc., Kearny, N. J.

—(Hardwood, Maple, Oak.)
Kirby Lumber Co., Houston, Tex.
Nashville Hardwood Flooring Co., Nashville, Tenn.

—(Northern Hard Maple.)
Holt Hardwood Co., Oconto, Wis.

—(Open Steel.)
Blaw-Knox Co., Pittsburgh, Pa.
Irving Iron Works Co., Long Is. City, N. Y.
Kerlow Steel Flooring Co., Jersey City, N. J.

—(Rubber and Cork.)
Congoleum-Nairn, Inc., Kearny, N. J.

—Covering.
Congoleum-Nairn, Inc., Kearny, N. J.

—Hardener (Concrete.)
Sonneborn Sons, Inc., L., New York.
Stonhard Co., Phila., Pa.

—Plates and Stair Treads.
American Pressed Steel Co., Phila., Pa.
Central Iron & Steel Co., Harrisburg, Pa.

—Steel (For Concrete Culverts, Roads, Streets.)
Blaw-Knox Co., Pittsburgh, Pa.

—Wax.
Congoleum-Nairn, Inc., Kearny, N. J.

—(Wood) Preservative.
Stonhard Co., Phila., Pa.

FLUSH-TANK SIPHONS.
Faste Flush-Tank Co., New York, N. Y.

FLYER PRESSERS.
Southern Spindle & Flyer Co., Charlotte, N. C.

FLYERS.
Southern Spindle & Flyer Co., Charlotte, N. C.

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Vogt Mch. Co., Henry, Louisville, Ky.

FORMS, Steel (For Concrete, Culverts, Roads, Streets, Curbs, Sidewalks, Tiles.)
Blaw-Knox Co., Pittsburgh, Pa.

FOUNDATION MASONRY.
Calligan Co., A. H., Richmond, Va.

FOUNDRIES and Machine Shops.
Deemer Steel Casting Co., New Castle, Del.

General Machine Works, York, Pa.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.

Goldsens Fdry. & Mch. Co., Columbus, Ga.

Leubard Iron Works & Supply Co., Augusta, Ga.

Wocessin Bushing Co., Chattanooga, Tenn.

Mountain States Steel Foundries Parkersburg, W. Va.

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Chain Belt Co., Milwaukee, Wis.

Hill & Griffith Co., The, Cincinnati, O.

—Facing (Talc and Soapstone.)
Hill & Griffith Co., The, Cincinnati, O.

FUMIGATORS (Fruit, Nuts, Nursery Stock, etc.)
Union Tank & Pipe Co., Los Angeles, Cal.

FURNACES (Industrial.)
Combustion Engr. Corp., New York City.

—(Water-Cooled.)
Combustion Engr. Corp., New York City.
Fuller Lehigh Co., Fullerton, Pa.

GALVANIZED Products.
Birmingham Galvanizing Co., Birmingham, Ala.

Cattle & Bros., Jos. P., Philadelphia, Pa.

—Steel and Iron.
American Rolling Mill Co., Middletown, O.

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Granite City Steel Co., Granite City, Ill.
Republic Steel Corp., Youngstown, Ohio.

GALVANIZING (Cadmium Plating.)
Birmingham Galvanizing Co., Birmingham, Ala.

—(Hot Dip.)
Bessemer Galvanizing Works, Birmingham, Birmingham Galvanizing Co., Birmingham, Ala.

Cattle & Bros., Jos. P., Philadelphia, Pa.
Newport News Shipbuilding & Drydock Co., Newport News, Va.

GARAGES (Metal.)
Maryland Metal Building Co., Balto., Md.

GAS HOLDERS.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Works, Atlanta, Ga.

—Producers.
Gas-O-Flame Stove Works, Port Deposit, Md.

Morgan Construction Co., Worcester, Mass.
Wood & Co., R. D., Philadelphia, Pa.

GASOLINE and KEROSENE.
Gulf Refining Co., Pittsburgh, Pa.

GASOLINE SHOVELS (See Shovels.)

GATES (Automatic Drainage.)
Armed Culvert Mfrs. Assn., Middletown, O.

Dixie Culvert & Metal Co., Atlanta, Ga.
Dixie Culvert Mfg. Co., Little Rock, Ark.

Louisiana Corr. Culvert Co., Baton Rouge, La.
Tenn. Metal Culvert Co., Nashville, Tenn.

Western Metal Mfg. Co., Houston, Texas.

GAUGE GLASSES.
Jenkins Bros., New York, N. Y.

GEARS.
DeLaval Steam Turbine Co., Trenton, N. J.

Earle Gear & Machine Co., Phila., Pa.
General Electric Co., Schenectady, N. Y.

—(Worm Reduction.)
DeLaval Steam Turbine Co., Trenton, N. J.

GENERATORS, MOTORS (New.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.

General Electric Co., Schenectady, N. Y.
Howell Electric Motors Co., Howell, Mich.

Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.
Wisconsin Motor Co., Milwaukee, Wis.

—(Used.)
Belyas Co., Inc., New York City.

Electrical Equip. Co., Raleigh, N. C.
Gregory Electric Co., Chicago.

Nashville Ind. Corp., Old Hickory, Tenn.
Nussebaum & Co., V. M., Ft. Wayne, Ind.

O'Brien Machinery Co., Phila., Pa.
Randle Machinery Co., The, Cincinnati, O.

Stewart Elec. Co., John A., Cincinnati, O.

GEOLOGISTS. (See Engineers, Geological.)

GLASS (Art.)
Blaw-Knox Co., Phila., Pa.

Hires Turner Glass Co., Philadelphia, Pa.

—(Plate.)
Blaw-Knox Co., Inc., Memphis, Tenn.

Blue Ridge Glass Corp., Kingsport, Tenn.
Hires Turner Glass Co., Philadelphia, Pa.

—(Window.)
Blue Ridge Glass Corp., Kingsport, Tenn.

Hires Turner Glass Co., Philadelphia, Pa.

—(Wire.)
Blue Ridge Glass Corp., Kingsport, Tenn.

Hires Turner Glass Co., Phila., Pa.

GRADERS (Elevating.)
Adams Co., J. D., Indianapolis, Ind.

Caterpillar Tractor Co., San Leandro, Calif.

—(Leaning Wheel Road.)
Adams Co., J. D., Indianapolis, Ind.

—(One Man Motor.)
Adams Co., J. D., Indianapolis, Ind.

Riddell Co., W. A., Bucyrus, Ohio.

GRAPHITE.
Dixon Crucible Co., Jos., Jersey City, N. J.

GRATES and Grate Bars.
Schofield's Sons Co., J. S., Macon, Ga.

Vogt Machine Co., Henry, Louisville, Ky.

Hendrick Mfg. Co., Carbondale, Pa.
Irving Iron Works, Long Is. City, N. Y.

Kerlow Steel Flooring Co., Jersey City, N. J.

GRAVEL (Roofing and Road.)
American Limestone Co., Knoxville, Tenn.

Arundel Corp., The, Baltimore, Md.
Boxley & Co., W. W., Hanover, Va.

Friend & Co., Inc., Petersburg, Va.

GREASE CUPS.
Lunkenheimer Co., The, Cincinnati, O.

GRILLES (Brass, Bronze, Steel, etc.)
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

GRINDERS (Cylinder.)
Hutto Engineering Co., Detroit, Mich.

—(Electric.)
Chicago Pneumatic Tool Co., New York.

—(Gypsum, Limestone, etc.)
Raymond Bros. Impact Pulv. Co., Chicago.

GRINDING MACHINERY (Flexible Shaft.)
Hutto Engineering Co., Detroit, Mich.

Strand & Co., N. A., Chicago, Ill.

—Wheels.
Carborundum Co., Niagara Falls, N. Y.

GUARD RAIL (Road.)
National Traffic Guard Co., Atlanta.

GUNITE CONSTRUCTION.
Cement-Gun Co., Inc., Allentown, Pa.

Cement Gun Construction Co., Chicago.
Gunite Conc. & Constr. Co., Kansas City.

Gunite Constr. Co., New York City.
Rust Engineering Co., Birmingham, Ala.

GUNPOWDER.
Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

Hercules Powder Co., Inc., Wilmington, Del.

GUNS (Hydraulic.)
Georgia Iron Works, Augusta, Ga.

HANGARS (Airplane.)
Blaw-Knox Co., Pittsburgh, Pa.

Braden Steel Corp., Tulsa, Okla.
Ingalls Iron Works, Birmingham, Ala.

Maryland Metal Bldg. Co., Balto., Md.

HANGERS (Door, All Kinds.)
Richards-Wilcox Mfg. Co., Aurora, Ill.

—(Line Shaft.)
American Pulley Co., Philadelphia, Pa.

Wood's Sons Co., T. B., Chambersburg, Pa.

HARBOR IMPROVEMENTS.
Arundel Corp., Baltimore, Md.

Atlantic, Gulf & Pacific Co., New York.

HARDWARE (Door.)
Richards-Wilcox Mfg. Co., Aurora, Ill.

HEATERS (Asphalt.)
Honherst Co., Jos., Cincinnati, O.

HEATING Apparatus (Engineers and Contractors.)
Grinnell Co., Inc., Providence, R. I.

Foe Piping & Heating Co., Greenville, S. C.

Skinner Bros. Mfg. Co., St. Louis, Mo.

—Systems.
Clarage Fan Co., Kalamazoo, Mich.

Skinner Bros. Mfg. Co., St. Louis, Mo.

HOISTING MACHINERY.
Clyde Iron Works Sales Co., Duluth, Minn.

Lidgerwood Mfg. Co., Elizabeth, N. J.

HOISTS (Air Portable.)
Ingersoll-Rand Co., New York, N. Y.

Sullivan Machinery Co., Chicago, Ill.

—(Chain.)
Harrington Co., The, Philadelphia, Pa.

—(Electric.)
Clyde Iron Works Sales Co., Duluth, Minn.

Harnischfeger Corp., Milwaukee, Wis.

Milwaukee Elec. Crane & Hoist Corp., Milwaukee, Wis.

Mundy Hoisting Engine Co., J. S., Newark, N. J.

—(Gasoline.)
Clyde Iron Works Sales Co., Duluth, Minn.

Dake Engine Co., Grand Haven, Mich.
Mundy Hoisting Engine Co., J. S., Newark, N. J.

National Equipment Corp. (C. H. & M. Division), Milwaukee, Wis.

Nova Engine Co., Lansing, Mich.
O. K. Clutch & Mch. Co., Columbia, Pa.

Street Bros. Mch. Wks., Chattanooga, Tenn.

—(Hand Power.)
O. K. Clutch & Mch. Co., Columbia, Pa.

—(Steam.)
Clyde Iron Works Sales Co., Duluth, Minn.

Dake Engine Co., Grand Haven, Mich.
Mundy Hoisting Engine Co., J. S., Newark, N. J.

Street Bros. Mch. Wks., Chattanooga, Tenn.

HOOPS, Bands, etc. (Galvanized.)
Connors Steel Co., Birmingham, Ala.

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Blaw-Knox Co., Pittsburgh, Pa.

HOSE (Rubber.)
Republic Rubber Co., Youngstown, Ohio.

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Helm Hotel Systems, St. Louis, Mo.

Southern Hotel, The, Baltimore, Md.

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Eichley, Jr. Co., John, Pittsburgh.

HULLS (Steel.)
American Steel Drudge Co., Fort Wayne, Ind.

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Grinnell Co., Inc., Providence, R. I.

Skinner Bros. Mfg. Co., St. Louis, Mo.

HYDRANTS (Fire.)
Ludlow Valve Mfg. Co., The, Troy, N. Y.

Myers & Bro. Co., The, F. M., Ashland, O.

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Wood & Co., R. D., Philadelphia, Pa.

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Vogt Mch. Co., Henry, Louisville, Ky.

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Duplex Hanger Co., Cleveland, Ohio.

Swenson Evaporator Co., Harvey, Ill.

INCORPORATORS.
Corporation Service Co., Wilmington, Del.

Delaware Registration Trust Co., Wilmington, Del.

INJECTORS.
Jenkins Bros., New York, N. Y.

Randle Machinery Co., The, Cincinnati, O.

INSULATING MATERIALS.
General Electric Co., Schenectady, N. Y.

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Okanite Co., New York, N. Y.

INVESTMENT SECURITIES.
Electric Bond & Share Co., New York.

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Hanchett Bond Co., Inc., The, Chicago, Ill.

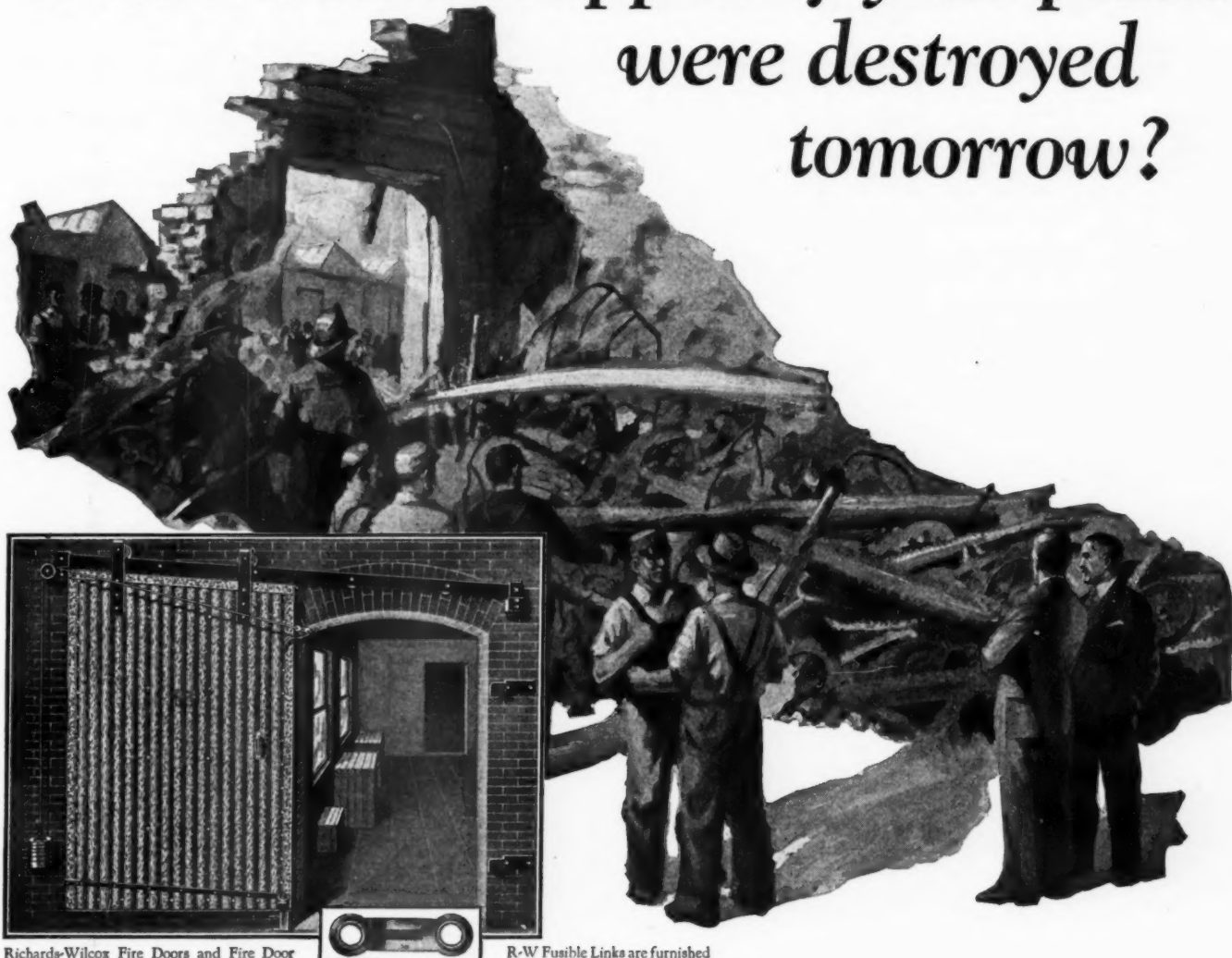
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Porter Co., H. K., Pittsburgh, Pa.

—(Gasoline.)

Porter Co., H. K., Pittsburgh, Pa.

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—(Industrial.)

Birmingham Rail & Locomotive Co., Birmingham, Ala.

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Southern Iron & Equipment Co., Atlanta, Ga.

Whitcomb Co., Geo. D., Rochelle, Ill.

—(Mining.)

Porter Co., H. K., Pittsburgh, Pa.

Whitcomb Co., Geo. D., Rochelle, Ill.

—(Mortar.)

Porter Co., H. K., Pittsburgh, Pa.

Southern Iron & Equipment Co., Atlanta, Ga.

Whitcomb Co., Geo. D., Rochelle, Ill.

LOGGING MACHINERY.

Clyde Iron Works Sales Co., Duluth, Minn.

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Gulf Refining Co., Pittsburgh, Pa.

LUBRICATORS, (Force Feed.)

Lunkenheimer Co., The, Cincinnati, O.

LUBRICATION SYSTEMS.

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Industrial Lumber Co., Elizabeth, La.

Kirby Lumber Co., Houston, Texas.

—(Creosoted.)

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Amer. Creosoting Co., Inc., Louisville, Ky.

Ayer & Lord Tie Co., Inc., Chicago, S. C.

Carolina Wood Preserving Co., Charleston, S. C.

Delaware Wood Preserving Co., Phila.

Eisenberg & Russell Co., New York, N. Y.

Gulf States Creos. Co., Hattiesburg, Miss.

Savannah Creos. Co., Savannah, Ga.

—(Heavy Construction, Pitch, Pine, etc.)

Industrial Lumber Co., Elizabeth, La.

Kirby Lumber Co., Houston, Texas.

—(Zinc Meta Arsenite Treated.)

Curtin-Howe Corp., New York City.

MACHINERY (Special.)

Bliss Co., E. W., Brooklyn, N. Y.

Earle Gear & Machine Co., Phila., Pa.

Fernaldt Machinery Co., St. Louis, Mo.

General Machine Works, York, Pa.

—and Supplies (New and Used.)

Belyas Co., Inc., New York City.

Electric Service Co., Cincinnati, Ohio.

Equip. Sales & Rentals Co., Pittsburgh.

Heineken Engineering Corp., New York.

Marine Metal & Supply Co., New York.

Nashville Ind. Corp., Old Hickory, Tenn.

O'Brien Machinery Co., The, Phila., Pa.

Randie Machinery Co., The, Cincinnati, O.

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Seyfert's Sons, Inc., L. F., Phila., Pa.

Zelnicker Supply Co., W. A., St. Louis.

MACHINE TENDERS (Steel.)

Angle Steel Stool Co., Plainwell, Mich.

—(Tools.)

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Sebastian Lathe Co., Cincinnati, Ohio.

—(Used.)

Delta Equipment Co., Philadelphia, Pa.

O'Brien Machinery Co., Phila., Pa.

MAIL CHUTES.

Cutler Mail Chute Co., Rochester, N. Y.

MARBLE (Producers and Manufacturers.)

Georgia Marble Co., Tate, Ga.

MATERIAL ELEVATORS.

National Equipment Corp. (Insley, C. H. & E.), Milwaukee, Wis.

METAL-Cutting Machinery.

Atkins & Co., E. C., Indianapolis, Ind.

Earle Gear & Machine Co., Phila., Pa.

—Working Machinery.

Bliss Co., E. W., Brooklyn, N. Y.

MILL MACHINERY and SUPPLIES.

Lombard Iron Works & Supply Co., Augusta, Ga.

MIXERS.

National Equipment Corp. (Kochring, T. L. Smith, Kwik-Mix), Milwaukee, Wis.

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Erie Machine Shops, Erie, Pa.

—(Hot.)

Kochring Co., Milwaukee, Wis.

—(Mortar.)

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Jaeger Machine Co., Columbus, Ohio.

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Howell Electric Motors Co., Howell, Mich.

Western Electric Co., New York City.

Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

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Wisconsin Motor Co., Milwaukee, Wis.

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Georgia Iron Works, Augusta, Ga.

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Aluminum Co. of America, Pittsburgh, Pa.

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Aluminum Co. of America, Pittsburgh, Pa.

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Foster Co., Benjamin, Philadelphia, Pa.

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Adam Elec. Co., Frank, St. Louis.

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Lapton's Sons Co., David, Phila., Pa.

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Wilson Corp., The, J. G. New York.

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Coleman, Watson E., Washington, D. C.

Easton, Paul B., Charlotte, N. C.

Sannett, Edward C., Washington, D. C.

Seymour & Bright, Washington, D. C.

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American Creosote Works, New Orleans.

—Blocks (Rubber.)

Serviced Premoulded Products, Inc., Chicago, Ill.

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—Plant (Asphalt.)

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Smith Co., S. Morgan, York, Pa.

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Davison Chemical Co., Baltimore, Md.

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Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.

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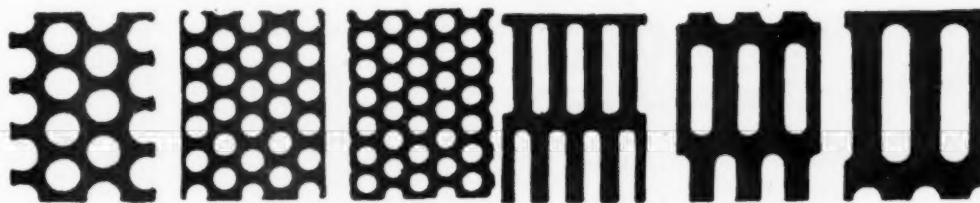
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Erie Pump & Engine Wks., Medina, N. Y.
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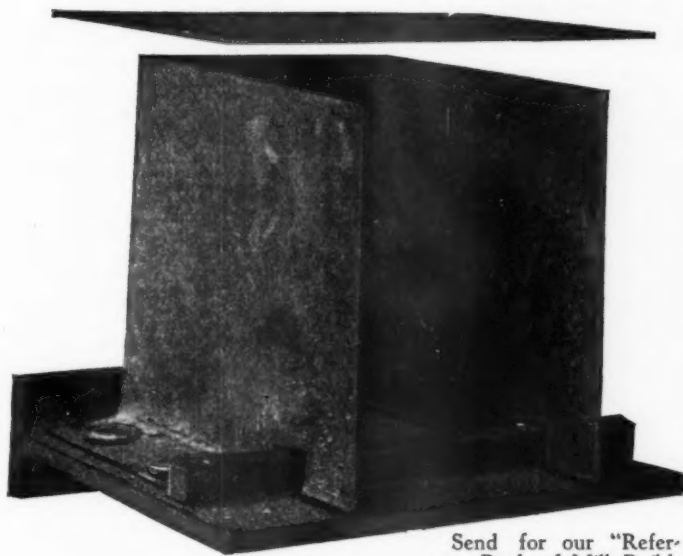
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Smith & Co., W. M., Birmingham, Ala.

SCREENING (For Concrete and Road Construction.)
American Limestone Co., Knoxville, Tenn.

SCREENS (Sand, Gravel, Stone, Coal, Ore, etc.)
Chicago Perforating Co., Chicago, Ill.
Erdle Perforating Co., Rochester, N. Y.
Heedrick Mfg. Co., Carbondale, Pa.
Ludlow Saylor Wire Co., The St. Louis, Mo.
McLanahan-Stone Machine Co., Hollidaysburg, Pa.
Mundt & Sons, Charles, Jersey City, N. J.
Stephens-Adams Mfg. Co., Birmingham, Ala.
Universal Crusher Co., Cedar Rapids, Iowa.

SCREW-Machine Products.
Progressive Mfg. Co., Torrington, Conn.

SCREWS (Machine.)
Progressive Mfg. Co., Torrington, Conn.

SEAWALLS.
Shore-Line Builders, Inc., Jacksonville, Fla.

SEPARATORS (Dust.)
Raymond Bros., Impact Pulv. Co., Chicago.

SEWAGE Disposal Apparatus.
Pacific Flush-Tank Co., New York, N. Y.

SEWER Joint Compounds.
Pacific Flush-Tank Co., New York, N. Y.
Servicised Premoulded Products, Inc., Chicago, Ill.

—(Pipe (Vitrified).)
Bannon Pipe Co., Louisville, Ky.
Cambridge Clay Products Co., Blackfork, O.
Dee Co., Wm. E., Oak Hill, Ohio.
Lee Clay Products Co., Clearfield, Ky.
Owensboro Sewer Pipe Co., Owensboro, Ky.

SEWER PIPE MACHINERY (Concrete.)
Quinn Wire & Iron Works, Boone, Iowa.

SHADES (Offset.)
Hough Shade Corp., Chicago, Ill.

SHAFTING.
Ryerson & Sons, Inc., Jos. T., St. Louis and New York.

—(Cold Rolled.)
Bliss & Laughlin, Inc., Harvey, Ill.
—(Flexible.)
Strand & Co., N. A., Chicago, Ill.
—(Material (Tubular).)
National Tube Co., Pittsburgh, Pa.

SHARPENING Stones.
Carborundum Co., Niagara Falls, N. Y.

SHEET Metal Work.
National Blow Pipe & Mfg. Co., Ltd., New Orleans, La.
Skinner Bros. Mfg. Co., St. Louis, Mo.
—Metal Working Machinery.
Bliss Co., E. W., Brooklyn, N. Y.
Whitney Metal Tool Co., Rockford, Ill.
Yoder Co., The, Cleveland, Ohio.

—Steel and Iron.
American Rolling Mill Co., Middletown, O.
American Sheet and Tin Plate Co., Pittsburgh, Pa.
Bethlehem Steel Co., Bethlehem, Pa.
Granite City Steel Co., Granite City, Ill.
Republic Steel Corp., Youngstown, Ohio.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Youngstown Sheet & Tube Co., Youngstown, O.

SHEETS (Asbestos.)
Ambler Asbestos Shingle & Sheathing Co., Ambler, Pa.
Eternit, Inc., St. Louis, Mo.

—(Steel—Asbestos Covered).
Bederson Co., H. H., Pittsburgh, Pa.

SHELVING (Unit.)
Lepton's Sons Co., David, Phila., Pa.

SHINGLES (Asbestos.)
Ambler Asbestos Shingle & Sheathing Co., Ambler, Pa.
Eternit, Inc., St. Louis, Mo.

—(Stain.)
Cabot, Inc., Samuel, Boston, Mass.

SHOVELS (Hand.)
American Mfg. Co., Chattanooga, Tenn.

—(Steam, Gas and Electric Power.)
Bucyrus-Erie Co., Erie, Penna.
Harnischfeger Corp., Milwaukee, Wis.
Industrial Brownhoist Corp., Cleveland, O.
National Equipment Corp. (Kochring, Insley), Milwaukee, Wis.
Northwest Engineering Co., Chicago, Ill.
Ohio Power Shovel Co., Lima, Ohio.
Thew Shovel Co., The, Lorain, Ohio.
Universal Power Shovel Co., Milwaukee, Wis.

SHUTTERS (Steel.)
Merchant & Evans Co., Philadelphia, Pa.
—(Steel and Wood Bifolding).
Kinross Mfg. Co., The, Columbus, Ohio.

SILICATE OF SODA.
Grasselli Chemical Co., Inc., Birmingham, Ala.

SITES (Manufacturing.)
Alabama Power Co., Birmingham, Ala.
Arkansas Natural Gas Corp., Shreveport, La.
Atlanta and West Point E. R., Atlanta, Brown & Co., Chattanooga, Tenn.
Central of Georgia Rwy., Savannah, Ga.
Central Power & Light Co., San Antonio, Galveston City of, Galveston, Texas.
Georgia Power Co., Atlanta, Ga.
Jacksonville, City of Jacksonville, Florida.
Missouri-Kansas-Texas Lines, Dallas, Texas.
Model Land Company, (Flagler System), St. Augustine, Fla.
Norfolk & Western Railway, Roanoke, Va.
Tennessee Central Railway, Nashville, Tenn.
Texas Power & Light Co., Dallas, Texas.

SKYLIGHTS.
Milcor Steel Co., Milwaukee, Wis.
Robertson Co., H. H., Pittsburgh, Pa.

SLABS (Concrete Floor.)
American Cement Tile Mfg. Co., Pittsburgh, Pa.
—(Concrete Roof).
American Cement Tile Mfg. Co., Pittsburgh, Pa.

SLAG, For Concrete.
Sloss-Sheffield Steel and Iron Co., Birmingham, Ala.
Woodstock Slag Corp., Birmingham, Ala.
—(Furnace).
Sloss-Sheffield Steel and Iron Co., Birmingham, Ala.
Woodstock Slag Corp., Birmingham, Ala.

SLINGS (Chain.)
Woodhouse Chain Works, Trenton, N. J.
—(Wire Rope).
Reebing's Sons Co., John A., Trenton, N. J.

SLUICE GATES AND APPLIANCES.
Smith Co., S. Morgan, York, Pa.

SMELTERS.
Swenson Evaporator Co., Harvey, Ill.

SNATCH BLOCKS (For Wire and Manila Rope.)
Patterson Co., W. W., Pittsburgh.

SPADES.
American Mfg. Co., Chattanooga, Tenn.

SPEED REDUCERS.
Earle Gear & Mach. Co., Phila., Pa.
Morse Chain Co., Raham, N. Y.
Stephens-Adams Mfg. Co., Birmingham, Ala.

SPIKES, (Railroad, Ship.)
Bethlehem Steel Co., Bethlehem, Pa.
Republic Steel Corp., Youngstown, Ohio.
Sweet's Steel Co., Williamsport, Pa.

SPINNINGS (Metal for Aircraft.)
Benson Brass & Chandler Works, Kansas City, Mo.

SPRINGS (Machinery, Railway, Spiral Steel.)
American Steel & Wire Co., Balto., Md.
Raymond Mfg. Co., Corry, Pa.

—(Wire—All Kinds.)
American Steel & Wire Co., Balto., Md.

SPRINKLERS (Automatic Fire.)
Grinnell Co., Inc., Providence, R. I.

SPROCKETS.
Diamond Chain & Mfg. Co., Indianapolis.
Morse Chain Co., Ithaca, N. Y.

STACKS (Iron and Steel.)
Biggs Boiler Works Co., Akron, Ohio.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge and Iron Works, Atlanta.
Downingtown Iron Works, Downingtown, Pa.
Hammond Iron Works, Warren, Pa.
Hedgoc Walsh Weldner Co., Chattanooga, Tenn.
Ingalls Iron Works Co., Birmingham, Ala.
Lombard Iron Works & Supply Co., Augusta, Ga.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Schnefeld's Sons Co., J. S., Mason, Ga.
U. S. Pipe & Foundry Co., Burlington, N. J.
Virginia Bridge & Iron Co., Roanoke, Va.

STAINS (Shingle, Woodwork.)
Cabot, Inc., Samuel, Boston, Mass.

STAIR Steps (Safety.)
Irving Iron Works Co., Long Is. City, N.Y.

—Treads.
Bates Steel Corp., Walter, Gray, Ind.
Central Iron & Steel Co., Harrisburg, Pa.

STAMPING (Sheet Metal.)
American Pulley Co., Philadelphia, Pa.
—Steel (All Kinds).
Commercial Shearing & Stamping Co., Youngstown, Ohio.

STANDPIPES.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Works, Atlanta, Ga.
Hammond Iron Works, Warren, Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

STATIONERS (Envelopes, Letter and Billheads, etc.)
Smith & Son Co., Oscar T., Baltimore, Md.
Young & Selden Co., Baltimore, Md.

STEAM SHOVELS.
Bucyrus-Erie Co., Erie, Pa.
Thew Shovel Co., The, Lorain, Ohio.

—Specialties.
Jenkins Bros., New York, N. Y.
Lunkenheimer Co., The, Cincinnati, O.
Mueller Co., Decatur, Ill.
—Traps.
Jenkins Bros., New York, N. Y.

STEEL.
Bethlehem Steel Co., Bethlehem, Pa.
Central Iron & Steel Co., Harrisburg, Pa.
Dietrich Brothers, Baltimore, Md.
Gulf States Steel Co., Birmingham, Ala.
Republic Steel Corp., Youngstown, Ohio.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.

—(Alloy).
Timken Roller Bearing Co., Canton, Ohio.
—(Cold Drawn).
Bliss & Laughlin, Inc., Harvey, Ill.

—(Cold Rolled).
American Steel & Wire Co., Balto., Md.
Bliss & Laughlin, Inc., Harvey, Ill.

—(Information Only).
American Institute of Steel Construction, Inc., New York City.

—(Liners for Sewers, Tunnels and Caissons).
Commercial Shearing & Stamping Co., Youngstown, O.

—(Special Analysis).
Timken Roller Bearing Co., Canton, Ohio.

—(Tool, High Speed).
Bethlehem Steel Co., Bethlehem, Pa.

—Buildings (Designers and Builders).
American Bridge Co., New York, N. Y.
Belmont Iron Works, Philadelphia, Pa.
Braden Steel Corp., Tulsa, Okla.
Bauer Mfg. Co., Kansas City, Mo.
Carolina Steel & Iron Co., Greensboro, N. C.

Champion Bridge Co., Wilmington, O.
Eichleay, Jr., Co., John, Pittsburgh.
Ingalls Iron Works Co., Birmingham, Ala.
McClintic-Marshall Co., Pittsburgh, Pa.
Phoenix Iron Co., The, Phila., Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Richmond Strun. Steel Co., Richmond, Va.
Virginia Bridge & Iron Co., Roanoke, Va.

—Forms (Curb, Gutter, Side-walk, Road).
Blaw-Knox Co., Pittsburgh, Pa.

—Plate Construction (Riveted or Welded).
Biggs Boiler Works Co., Akron, Ohio.

Birmingham Boiler & Engr. Co., Birmingham, Ala.
Bristol Steel & Iron Works, Inc., Bristol, Va.
Carolina Steel & Iron Co., Greensboro, N. C.
Central Iron & Steel Co., Harrisburg, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Works, Atlanta, Ga.
Combustion Engr. Corp., New York City.
Hammond Iron Works, Warren, Pa.
Hedgoc Walsh Weldner Co., Chattanooga, Tenn.
Ingalls Iron Works Co., Birmingham, Ala.
Mecklenburg Iron Works, Charlotte, N. C.
Phoenix Iron Co., The, Phila., Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

—Tank Heads.
Commercial Shearing & Stamping Co., Youngstown, Ohio.

STOKERS (Mechanical.)
Babcock & Wilcox Co., The, New York.
Combustion Engr. Corp., New York City.

STORAGE Batteries.
Electric Storage Battery Co., Philadelphia.
—Bins (Steel).
Blaw-Knox Co., Pittsburgh, Pa.

STRIPS (Steel.)
American Steel & Wire Co., Baltimore.

STRUCTURAL STEEL (Hot Galvanized.)
Bessemer Galvanizing Works, Birmingham.

—and Iron.
American Bridge Co., New York, N. Y.
Belmont Iron Works, Philadelphia, Pa.

Bristol Steel & Iron Works, Inc., Bristol, Va.
Carnegie Steel Co., Pittsburgh, Pa.
Carolina Steel & Iron Co., Greensboro, N. C.

Champion Bridge Co., Wilmington, Ohio.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Converse Bridge & Steel Co., Chattanooga, Tenn.

Dietrich Brothers, Baltimore, Md.
Eichleay, Jr. Co., John, Pittsburgh.

Erie Steel Constr. Co., Erie, Pa.
Ingalls Iron Works Co., Birmingham, Ala.

McClintic-Marshall Co., Pittsburgh, Pa.
Nashville Bridge Co., Nashville, Tenn.

Phoenix Iron Co., The, Phila., Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Republic Steel Corp., Youngstown, Ohio.
Richmond Strun. Steel Co., Richmond, Va.

Roanoke Iron & Bridge Works, Inc., Roanoke, Va.

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Snead Architectural Iron Works, Louisville, Ky.

Southern Engineering Co., Charlotte, N. C.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Virginia Bridge & Iron Co., Roanoke, Va.

SULPHATE OF ALUMINA.
Grasselli Chemical Co., Inc., Birmingham, Ala.

SULPHATE PULP MILLS.
Swenson Evaporator Co., Harvey, Ill.

SULPHIDE OF SODA.
Grasselli Chemical Co., Inc., Birmingham, Ala.

SULPHURIC ACID.
Davison Chemical Co., The, Balto., Md.
Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

SUPER-HEATERS (Steam.)
Babcock & Wilcox Co., The, New York.

SURVEYS (Industrial.)
Dane-Wolfe Co., Washington, D. C.
MacElwhee & Crandall, Inc., Cambridge, Mass.

Technical Service Co., New York, N. Y.

—Quantity.
Rowan, W. E., Charlotte, N. C.
Spring, Charles Herbert, Greensboro, N. C.

Williams, O. F., Charlotte, N. C.

SURVEYING INSTRUMENTS.
Weber Co., Inc., F., Philadelphia, Pa.

SWINGING ENGINES.
Dake Engine Co., Grand Haven, Mich.

SWITCHBOARDS, SWITCHES, ETC.
Adam Elec. Co., Frank, St. Louis.
General Electric Co., Schenectady, N. Y.
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

SYSTEMS (Business.)
Ernst & Ernst, New York, N. Y.

TACKLE BLOCKS (For Wire and Manila Rope.)
Patterson Co., W. W., Pittsburgh.

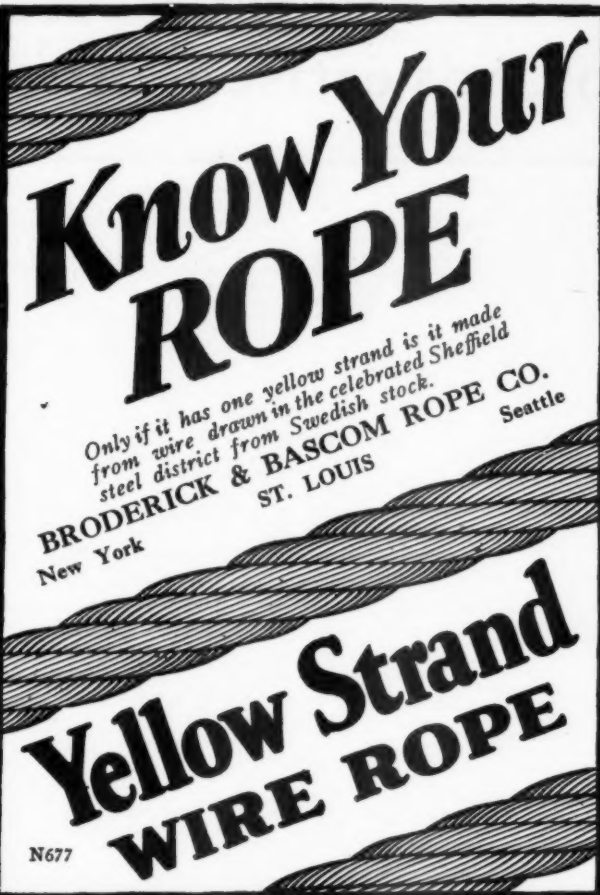
Specialties are Products of Exacting Qualities

The manufacture of steel specialties demands unfailing accuracy and strict adherence to specifications. Sizes must be exact . . . threads must be correct . . . proper strength for long service must be inherent. Republic, manufacturing the raw materials, provides a quality and uniformity otherwise unobtainable. Skill and experience gained in many years of specialty manufacturing insures a product of fine workmanship, satisfactory in every detail.



REPUBLIC
STEEL CORPORATION, YOUNGSTOWN, O.
SPECIALTIES

- TANKS (Air Compressor.)**
Air-Tight Steel Tank Co., Pittsburgh, Pa.
Seafie & Sons, Wm. B., Oakmont, Pa.
Titusville Iron Works Co., Titusville, Pa.
—(Elevated Steel.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Works, Atlanta, Ga.
Cole Mfg. Co., R. D., Newnan, Ga.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Schenck's Sons Co., J. S., Mason, Ga.
Virginia Bridge & Iron Co., Roanoke, Va.
—(Elevated Wood.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, G. M., Palatka, Fla.
Woolford Wood Tank Mfg. Co., G., Paschall P. O., Philadelphia.
—(Iron and Steel.)
Air-Tight Steel Tank Co., Pittsburgh, Pa.
American Bridge Co., New York, N. Y.
Biggs Boiler Works Co., Akron, Ohio.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Works, Atlanta, Ga.
Cole Mfg. Co., R. D., Newnan, Ga.
Downingtown Iron Works, Downingtown, Pa.
Hammond Iron Works, Warren, Pa.
Lombard Iron Works & Supply Co., Augusta, Ga.
McClintic-Marshall Co., Pittsburgh, Pa.
Mecklenburg Iron Works, Charlotte, N. C.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Seafie & Sons, Wm. B., Oakmont, Pa.
Schenck's Sons Co., J. S., Mason, Ga.
Titusville Iron Works Co., Titusville, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.
Westinghouse Traction Brake Co., Wilmerding, Pa.
—(Seamless Steel.)
Janney, Jr., Jas. A., Phila., Pa.
National Tube Co., Pittsburgh, Pa.
—(Storage, Oil, etc.)
Biggs Boiler Works, Akron, Ohio.
Birmingham Boiler & Engr. Co., Birmingham, Ala.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Works, Atlanta, Ga.
Downingtown Iron Works, Downingtown, Pa.
Hammond Iron Works, Warren, Pa.
Ingalls Iron Works Co., Birmingham, Ala.
Mecklenburg Iron Works, Charlotte, N. C.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Titusville Iron Works Co., Titusville, Pa.
—(Wood.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, G. M., Palatka, Fla.
Virginia Mch. & Well Co., Richmond, Va.
Woolford Wood Tank Mfg. Co., G., Paschall P. O., Philadelphia.
—(Wood Pickling.)
Woolford Wood Tank Mfg. Co., G., Paschall P. O., Philadelphia.
- TAPE (Insulating.)**
Okonite Co., New York, N. Y.
—(Measuring.)
Lufkin Rule Co., Saginaw, Mich.
- TAX SPECIALISTS.**
Ernst & Ernst, New York, N. Y.
Harrison, Wm. Henry, Washington, D. C.
Le Baron, Ernest T., Jacksonville, Fla.
- TELEPHONE SERVICE.**
American Telephone & Telegraph Co.
- TERRA COTTA (Ornamental.)**
Atlanta Terra Cotta Co., Atlanta, Ga.
- TEXTILE CHEMICALS.**
Grasselli Chemical Co., Inc., Birmingham, Ala.
- TILE (Cement Roofing.)**
American Cement Tile Mfg. Co., Pittsburgh, Pa.
—(Cork Composition.)
Congoleum-Nairn, Inc., Kearny, N. J.
—(Cork Flooring.)
Congoleum-Nairn, Inc., Kearny, N. J.
—(Floor.)
Hood Co., B. Mifflin, Daisy, Tenn.
—(Hollow Building.)
Cambria Clay Products Co., Blackfork, Ohio.
—(Roof.)
Hood Co., B. Mifflin, Daisy, Tenn.
—(Rubber.)
Congoleum-Nairn, Inc., Kearny, N. J.
—(Sewer.)
Lee Clay Products Co., Clearfield, Ky.
- TIMBER Fittings.**
Duplex Hanger Co., Cleveland, Ohio.
—(Creosoted.)
Amer. Creosote Wks., Inc., New Orleans.
Amer. Creosoting Co., Inc., Louisville, Ky.
Carolina Wood Preserving Co., Charleston, S. C.
- TIME Recorders.**
Kaiser Klock Co., L. E., Baltimore, Md.
- TIN AND TERNE PLATES.**
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Bethlehem Steel Co., Bethlehem, Pa.
Granite City Steel Co., Granite City, Ill.
Youngstown Sheet & Tube Co., Youngstown, Ohio.
- TOBACCO MACHINERY.**
Ripley Foundry & Machine Co., Ripley, O.
- TOILET TISSUE.**
Victoria Paper Mills Co., Fulton, N. Y.
- TOOLS (Measuring.)**
Lufkin Rule Co., Saginaw, Mich.
—(Woodworking—Portable.)
Electric, Hand.)
Wappat, Incorporated, Pittsburgh, Pa.
- TORCHES (Blow.)**
Wall Mfg. Supply Co., P., Pittsburgh, Pa.
- TOWERS (Electric Transmission.)**
American Bridge Co., New York, N. Y.
Bates Steel Corp., Walter, Gray, Ind.
Bessemer Galvanizing Works, Birmingham, Nashville Bridge Co., Nashville, Tenn.
—(Radio.)
Bessemer Galv. Wks., Birmingham, Ala.
—(Steel and Wood.)
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Cole Mfg. Co., R. D., Newnan, Ga.
- TRACK (Portable or Permanent.)**
Sweet's Steel Co., Williamsport, Pa.
- TRACTORS (Industrial.)**
Atlas Car & Mfg. Co., The, Cleveland, O.
Caterpillar Tractor Co., San Leandro, Cal.
Clark Tractor Co., Battle Creek, Mich.
Cleveland Tractor Co., Cleveland, Ohio.
International Harvester Co., of America, Inc., Chicago, Ill.
—(Road.)
Caterpillar Tractor Co., San Leandro, Cal.
Cleveland Tractor Co., Cleveland, Ohio.
—Attachments (Side Boom.)
W-K-M Co., Inc., Houston, Texas.
- TRAILERS. (Four Wheel.)**
Electric Wheel Co., Quincy, Ill.
—(Heavy Duty.)
Electric Wheel Co., Quincy, Ill.
—(Industrial.)
Easton Car & Construction Co., Easton, Pa.
Electric Wheel Co., Quincy, Ill.
—(Pole.)
Electric Wheel Co., Quincy, Ill.
- TRAMWAYS (Aerial Wire Rope.)**
American Steel & Wire Co., Balto., Md.
Broderick & Bascom Rope Co., St. Louis.
Leach & Sons Rope Co., A., St. Louis.
- TRANSFORMERS.**
General Electric Co., Schenectady, N. Y.
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.
—(Used.)
Electric Service Co., Cincinnati, Ohio.
- TRANSMISSION TOWERS (Galvanized.)**
Bates Steel Corp., Walter, Gray, Ind.
Bessemer Galvanizing Works, Birmingham, McClintic-Marshall Co., Pittsburgh, Pa.
- TRENCH MACHINERY. See**
Excavators (Trench.)
- TRESTLES (Wooden.)**
Patent Scaffolding Co., Chicago, Ill.
- TRI-SODIUM PHOSPHATE.**
Grasselli Chemical Co., Inc., Birmingham, Ala.
- TROLLEY WHEELS (Self Oil-ing.)**
Moccasin Bushing Co., Chattanooga, Tenn.
- TRUCK CRANES.**
Universal Crane Co., Lorain, O.
- TRUCKS (Dry Kiln.)**
Moore Dry Kiln Co., Jacksonville, Fla.
—(Industrial.)
Atlas Car & Mfg. Co., The, Cleveland, O.
Lansing Co., Lansing, Mich.
Nutting Truck Co., Chicago, Ill.
—(Motor.)
International Harvester Co., of America, Inc., Chicago, Ill.
- (Platform, Freight, Mill, Factory, etc.)
American Pulley Co., Philadelphia, Pa.
Clark Tractor Co., Battle Creek, Mich.
Electric Wheel Co., Quincy, Ill.
Nutting Truck Co., Chicago, Ill.
Truscon Steel Co., (Pressed Steel Division) Cleveland, Ohio.
—(Steel Shop.)
Angle Steel Stool Co., Plainwell, Mich.
- TUBES (Boiler.) See** Boiler Tubes.
- TUBING (Metal.)**
Boiler Tube Co., of America, Pittsburgh.
—(Seamless Steel.)
National Tube Co., Pittsburgh, Pa.
Timken Rolling Bearing Co., Canton, O.
- TURBINES (Hydraulic.)**
Cook, Inc., A. D., Lawrenceburg, Ind.
Davis Foundry & Mach. Works, Rome, Ga.
Lefell & Co., The James, Springfield, O.
Smith Co., S. Morgan, York, Pa.
—(Steam.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
DeLaval Steam Turbine Co., Trenton, N. J.
General Electric Co., Schenectady, N. Y.
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.
- TURNBUCKLES.**
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- TURNABLES.**
American Bridge Co., New York, N. Y.
Easton Car & Construction Co., Easton, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.
—(Portable for Motor Trucks.)
Blaw-Knox Co., Pittsburgh, Pa.
- UNIONS.**
Dart Mfg. Co., E. M., Providence, R. I.
- UNIT HEATERS.**
Grinnell Co., Inc., Providence, R. I.
Skinner Bros., Mfg. Co., St. Louis, Mo.
- VALVES.**
Jenkins Bros., New York, N. Y.
Ludlow Valve Mfg. Co., The, Troy, N. Y.
Lunkenheimer Co., The, Cincinnati, Ohio.
Merco Nordstrom Valve Co., San Francisco, Cal.
Mueller Co., Decatur, Ill.
Vogt Brothers Mfg. Co., Louisville, Ky.
Vogt Machine Co., Henry, Louisville, Ky.
Westinghouse Traction Brake Co., Wilmerding, Pa.
—(Acid Proof.)
Lunkenheimer Co., The, Cincinnati, O.
—(Gate.)
Ludlow Valve Mfg. Co., The, Troy, N. Y.
Lunkenheimer Co., The, Cincinnati, Ohio.
Wood & Co., R. D., Philadelphia, Pa.
- VENTILATING SYSTEMS.**
Skinner Bros. Mfg. Co., St. Louis, Mo.
Swartwout Co., Cleveland, Ohio.
- VENTILATORS (Roof.)**
Merchant & Evans Co., Philadelphia, Pa.
Milcor Steel Co., Milwaukee, Wis.
Robertson Co., H. H., Pittsburgh, Pa.
—(Rotary.)
Swartwout Co., Cleveland, Ohio.
- WALL HANGERS.**
Duplex Hanger Co., Cleveland, Ohio.
- WARDROBES (Hygienic, School.)**
Wilson Corp., The J. G., New York.
- WATCHMAN'S PORTABLE CLOCKS.**
Davis-Paradis Watchman's Clock Corp., New York, N. Y.
Kaiser Klock Co., L. E., Balto., Md.
- WATERPROOFING (For Brick, Concrete, Granite.)**
Asphalt Products Co., Syracuse, N. Y.
Foster Co., Benjamin, Philadelphia, Pa.
Serviced Premoulded Products, Inc., Chicago, Ill.
Seneborn, Sons, Inc., L., New York.
- WATER Purification.**
Roberts Filter Mfg. Co., Darby (Phila.), Pa.
Seafie & Sons, Wm. B., Oakmont, Pa.
—Softening Apparatus (Purifying.)
American Water Softener Co., Phila., Pa.
International Filter Co., Chicago, Ill.
—Works Supplies and Appliances.
Amer. Cast Iron Pipe Co., Birmingham.
Cast Iron Pipe Research Assn., Chicago.
- Cook, Inc., A. D., Lawrenceburg, Ind.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.
Leadite Co., The, Philadelphia, Pa.
Mueller Co., Decatur, Ill.
U. S. Pipe & Foundry Co., Burlington, N. J.
Wood & Co., R. D., Philadelphia, Pa.
- WELDING APPARATUS (Electric Arc.)**
General Electric Co., Schenectady, N. Y.
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.
- WELL CONTRACTORS (Oil, Artesian, etc.)**
Virginia Mach. & Well Co., Richmond, Va.
- WHEELBARROWS.**
Lansing Co., Lansing, Mich.
Sterling Wheelbarrow Co., Milwaukee.
- WHEELS AND AXLES.**
Carnegie Steel Co., Pittsburgh, Pa.
- WINCHES.**
Sagen Derrick Co., Chicago, Ill.
Schultz & Son, A. L., Chicago, Ill.
- WINDOW Frames and Sash (Metal.)**
Bayley Co., The William, Springfield, O.
Lupton's Sons Co., David, Phila., Pa.
Truscon Steel Co., Youngstown, O.
- WINDOWS (Bronze Casement.)**
Michaels Art Bronze Co., Covington, Ky.
—(Steel Basement, Casement.)
Bayley Co., The William, Springfield, O.
Detroit Steel Products Co., Detroit, Mich.
Lupton's Sons Co., David, Phila., Pa.
Milcor Steel Co., Milwaukee, Wis.
—(Steel Garage.)
Detroit Steel Products Co., Detroit, Mich.
Lupton's Sons Co., David, Phila., Pa.
—(Steel Pivoted, Screened.)
Bayley Co., William, Springfield, O.
—(Ventilating.)
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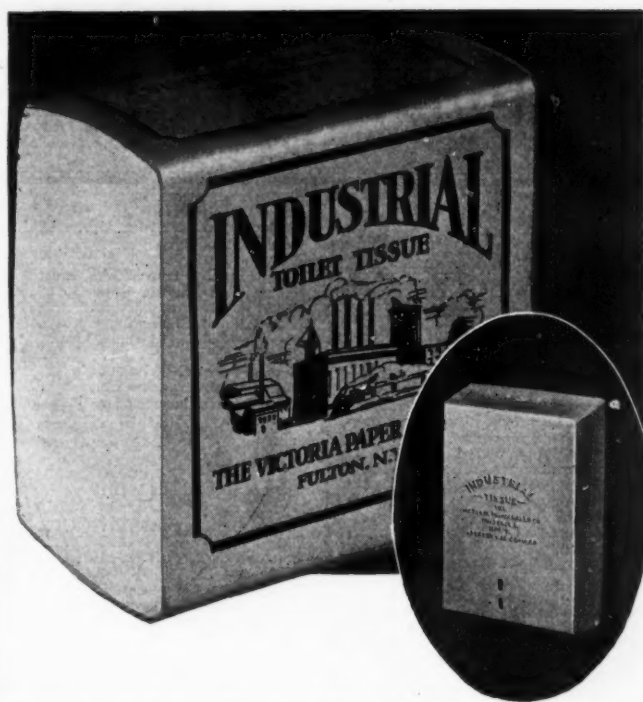
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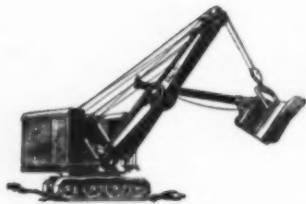
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